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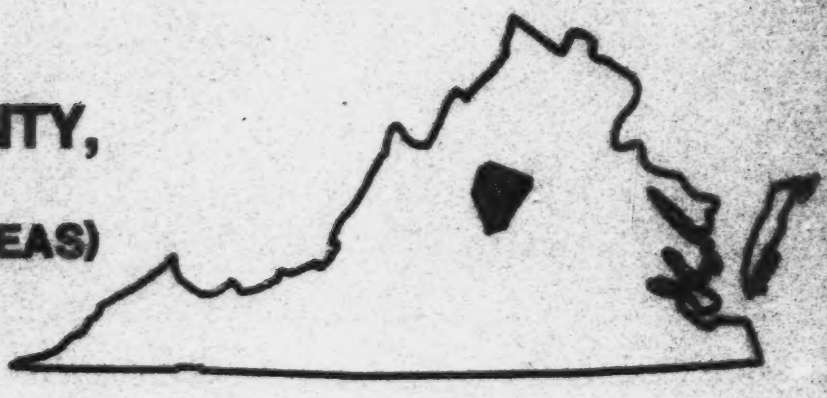
# FLOOD INSURANCE STUDY

## ALBEMARLE COUNTY, VIRGINIA (UNINCORPORATED AREAS)



REVISED:
APRIL 2, 1990

Federal Emergency Management Agency

COMMUNITY NUMBER - 510006

NOTICE TO
FLOOD INSURANCE STUDY USERS

Communities participating in the National Flood Insurance Program (NFIP) have established repositories of flood hazard data for floodplain management and flood insurance purposes. This Flood Insurance Study (FIS) may not contain all data available within the repository. It is advisable to contact the community repository for any additional data.

Part or all of this FIS may be revised and republished at any time. In addition, part of this FIS may be revised by the Letter of Map Revision (LOMR) process, which does not involve republication or redistribution of the FIS. It is, therefore, the responsibility of the user to consult with community officials and to check the community repository to obtain the most current FIS components.

Initial Flood Insurance Study Effective Date: December 16, 1980

Flood Insurance Study Revised: April 2, 1990

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Flood Boundary and Floodway Map

PUBLISHED SEPARATELY:

Flood Insurance Rate Map Index
Flood Insurance Rate Map

FLOOD INSURANCE STUDY
ALBEMARLE COUNTY, VIRGINIA

# 1.0 INTRODUCTION

## 1.1 Purpose of Study

This Flood Insurance Study investigates the existence and severity of flood hazards in the unincorporated areas of Albemarle County, Virginia, and aids in the administration of the National Flood Insurance Act of 1968 and the Flood Disaster Protection Act of 1973. This study has developed flood risk data for various areas of the community that will be used to establish actuarial flood insurance rates and assist the community in their efforts to promote sound floodplain management. Minimum floodplain management requirements for participation in the National Flood Insurance Program are set forth in the Code of Federal Regulations at 44 CFR, 60.3.

In some states or communities, floodplain management criteria or regulations may exist that are more restrictive or comprehensive than the minimum Federal requirements. In such cases, the more restrictive criteria take precedence and the state (or other jurisdictional agency) will be able to explain them.

## 1.2 Authority and Acknowledgments

The sources of authority for this Flood Insurance Study are the National Flood Insurance Act of 1968 and the Flood Disaster Protection Act of 1973.

The hydrologic and hydraulic analyses in this study represent a revision of the original analyses prepared by the Norfolk District of the U. S. Army Corps of Engineers (COE) for the Federal Emergency Management Agency (FEMA), under Inter-Agency Agreement No. IAA-H-10-77, Project Order No. 13. The work for the original study was completed in February 1979. The hydrologic and hydraulic analyses for the James River in this revision were prepared by CH2M HILL, Inc. for FEMA, under Contract No. H-3833, during the preparation of the Flood Insurance Study for the unincorporated areas of Buckingham County. The hydrologic and hydraulic analyses for Mink Creek and a portion of the James River in this revision were prepared by the COE under agreement with FEMA. That work was completed in July 1988.

## 1.3 Coordination

Streams requiring detailed study were identified at the initial Consultation and Coordination Officer's (CCO) meeting attended by representatives of FEMA, the COE (the study contractor), and Albemarle County in October 1976.

Analysis of the James River floodway was coordinated with flood profile data provided by the Norfolk District of the COE. Coordination with the Norfolk District included obtaining existing information and discussing methods and techniques used in its development.

The COE and officials of Albemarle County met in December 1978 to discuss the methodology of floodway determinations.

On January 10, 1980, the results of the study were reviewed at the final CCO meeting attended by representatives of the study contractor, FEMA, and the county.

## 2.0 AREA STUDIED

### 2.1 Scope of Study

This Flood Insurance Study covers the unincorporated areas of Albemarle County, Virginia. Not included in the study are the City of Charlottesville and the Town of Scottsville, which lie within the county. The area of study is shown on the Vicinity Map (Figure 1).

Detailed methods were used to study the following streams: the North Fork Rivanna River, from its mouth to approximately 3.5 miles upstream; Mechums River, from its mouth to State Route 635; the South Fork Rivanna River, from its mouth to the confluence of the Moormans and Mechums Rivers; Ivy Creek, from its mouth to Interstate Highway 64; Little Ivy Creek, from its mouth to approximately 1,000 feet above State Route 786; Jumping Branch, from its mouth to approximately 2.3 miles upstream; Powell Creek, from its mouth to U. S. Route 29; the Rivanna River, from State Route 729 to the confluence of the North and South Forks of the Rivanna River; Meadow Creek, from 1,500 feet below State Route 631 to the Southern Railway tracks, and from 500 feet to 2,000 feet above Brandywine Drive; Moores Creek, from its mouth to State Route 745; and Biscuit Run, from its mouth to approximately 2.8 miles upstream. In this revision, Mink Creek and a portion of the James River were studied by detailed methods to reflect the construction of the A. Raymon Thacker levee, which extends from the corporate limits of the Town of Scottsville to a point approximately 500 feet upstream, on the James River. In addition, this revision incorporates detailed analyses for the remaining portion of the James River within the county.

The areas studied by detailed methods were selected with priority given to all known flood hazard areas and areas of projected development and proposed construction.

The remaining streams in the county were studied by approximate methods. Approximate analyses were used to study those areas having a low development potential or minimal flood hazards. The scope and methods of study were proposed to, and agreed upon by, FEMA and Albemarle County.

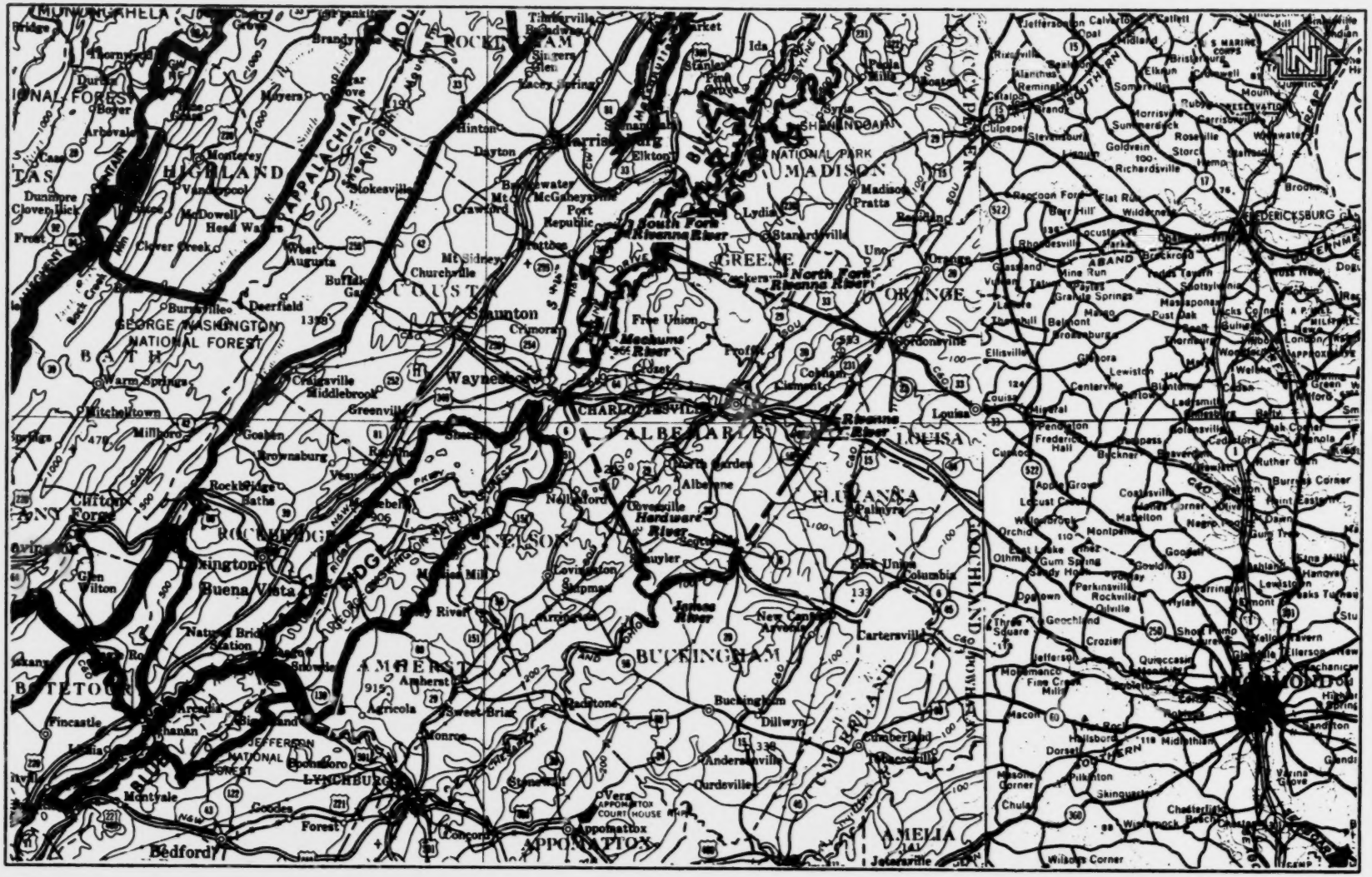



FIGURE 1

FEDERAL EMERGENCY MANAGEMENT AGENCY

**ALBEMARLE COUNTY, VA**
**(UNINCORPORATED AREAS)**

APPROXIMATE SCALE

25 0 25 50 75 MILES

**VICINITY MAP**

## 2.2 Community Description

Albemarle County is located in central Virginia, approximately 70 miles northwest of Richmond and approximately 110 miles southwest of Washington, D. C. The county is bordered to the north by the unincorporated areas of Rockingham, Orange, and Greene Counties, to the east by the unincorporated areas of Louisa and Fluvanna Counties, to the south by the unincorporated areas of Buckingham County, to the west by the unincorporated areas of Augusta County, and to the west and southwest by the unincorporated areas of Nelson County. The county has a total of 745 square miles, of which rivers, lakes, and streams make up approximately 6 square miles. Albemarle County lies partly in the Blue Ridge Province, thus accounting for its rolling, mountainous terrain. Temperatures average 37 degrees Fahrenheit ($^{o}$F) in January and 77$^{o}$F in July. Precipitation averages 46 inches per year (Reference 1).

Albemarle County, formed from Goochland County in 1744, was named for the second Earl of Albemarle, Governor of Virginia. Settlement began in about 1734, and the first County Courthouse was built in 1745 near Scottsville. In 1761, the Courthouse was moved to its present location in Charlottesville. Latest estimates place the 1977 county population at 50,000, with an additional 40,200 in Charlottesville (Reference 2).

Over half of the county is forested and there are a large number of lumber and millwork plants located within the county. Large quarries produce soapstone products, crushed stone, quartz, sand, and gravel. In colonial times, tobacco was the main crop, but it was replaced by wheat on many of the plantations in the county following the Revolution. Albemarle County has been a national leader in apples and peaches, but today the emphasis has shifted to livestock raising and dairy farming.

Manufacturing has grown in recent years and is of great variety. Most of the plants are in Charlottesville, but many are located in the county. The University of Virginia, with its many related enterprises, is the biggest business in Albemarle County. The entire area abounds in many points of historic and scenic interest, and draws thousands of visitors throughout the year.

## 2.3 Principal Flood Problems

Record flooding in Albemarle County has been produced by three different regional storm systems. In the Upper Rivanna River Basin, which includes the Charlottesville area and the area to its north, record flooding was produced in October 1942 by the remnants of a tropical storm passing east of the Blue Ridge Mountains. This storm produced intense rainfall over the Rivanna River watershed for approximately 3 days. Amounts totaling almost 10 inches were measured, while a short distance to the northeast, in the Rappahannock River Basin, up to 18.9 inches of rain were recorded.

Record flooding over the lower Rivanna River Basin and the Hardware River Basin, in southern Albemarle County, occurred in August 1969 as the remnants of Hurricane Camille passed from west to east across Virginia. On the Rivanna River, the peak discharge was recorded at 86,000 cubic feet per second (cfs), with a recurrence interval of 50 years. On the Hardware River, the peak discharge was 52,000 cfs, and the flood had a recurrence interval of 200 years. On the James River, the peak discharge was 188,000 cfs, and the recurrence interval was 59 years. Hurricane Camille caused an estimated 3.1 million dollars in damage to Albemarle County. In nearby Nelson County, Camille dumped over 25 inches of rain.

Tropical Storm Agnes, in June 1972, produced the record flood on the James River, with a peak discharge of 301,000 cfs and a recurrence interval of 230 years. On the Rivanna River, Agnes caused a peak discharge of 73,400 cfs and had a recurrence interval of 33 years. Tropical Storm Agnes did an estimated 7.4 million dollars in damage throughout the county.

Other major floods on the Hardware River occurred in September 1944 (23,000 cfs, recurrence interval of 37 years) and in August 1949 (11,100 cfs, recurrence interval of 11 years).

On the James River, other historic floods occurred in October 1870 (215,000 cfs, recurrence interval 87 years), November 1877 (160,000 cfs, recurrence interval 37 years), September 1944 (133,000 cfs, recurrence interval 20 years), August 1940 (130,000 cfs, recurrence interval 19 years), March 1936 (126,000 cfs, recurrence interval 17 years), March 1913 (121,000 cfs, recurrence interval 15 years), and March 1975 (114,000 cfs, recurrence interval 13 years).

The Rivanna River had record floods in October 1972 (45,800 cfs, recurrence interval 13 years), March 1936 (39,900 cfs, recurrence interval 10 years), and September 1944 (39,600 cfs, recurrence interval 10 years).

The areas that suffer the most damage in Albemarle County are the Charlottesville area and the small communities of Scottsville, Warren, and Howardsville, located along the James River. These areas sustain the bulk of residential, commercial, and industrial damage from floods. Agricultural and utility damage occurs throughout the county.

## 2.4 Flood Protection Measures

FEMA specifies that all levees must have a minimum of 3 foot freeboard against 100-year flooding to be considered a safe flood protection structure. The A. Raymon Thacker Levee, constructed by the COE for the Town of Scottsville, meets this freeboard requirement. It is designed to protect against 100-year flooding effects from the James River. The flood-protection effects of this levee have been incorporated in this revision.

Construction in areas of Albemarle County subject to flooding is governed by a statewide building code which requires, in part, that the lowest floor of all future construction or substantial improvement to any building located in the 100-year floodplain must be built at or above the elevation of the 100-year flood. Nonresidential structures may be flood-proofed to that elevation. Albemarle County has also established a general floodplain district through its zoning ordinance. This district is composed of two zones, a flood fringe and floodway, each limited to specific uses.

## 3.0 ENGINEERING METHODS

For the flooding sources studied in detail in the county, standard hydrologic and hydraulic study methods were used to determine the flood hazard data required for this study. Flood events of a magnitude that are expected to be equaled or exceeded once on the average during any 10-, 50-, 100-, or 500-year period (recurrence interval) have been selected as having special significance for floodplain management and for flood insurance rates. These events, commonly termed the 10-, 50-, 100-, and 500-year floods, have a 10, 2, 1, and 0.2 percent chance, respectively, of being equaled or exceeded during any year. Although the recurrence interval represents the long term average period between floods of a specific magnitude, rare floods could occur at short intervals or even within the same year. The risk of experiencing a rare flood increases when periods greater than 1 year are considered. For example, the risk of having a flood that equals or exceeds the 100-year flood (1 percent chance of annual exceedence) in any 50-year period is approximately 40 percent (4 in 10), and, for any 90-year period, the risk increases to approximately 60 percent (6 in 10). The analyses reported herein reflect flooding potentials based on conditions existing in the community at the time of completion of this study. Maps and flood elevations will be amended periodically to reflect future changes.

### 3.1 Hydrologic Analyses

Hydrologic analyses were carried out to establish the peak discharge-frequency relationships for each flooding source studied in detail affecting the county.

Flood-frequency discharge values for the James River in this revision were taken from the Flood Insurance Study for the unincorporated areas of Buckingham County (Reference 3). In that study, discharges for floods of the selected recurrence intervals on the James River were based upon a statistical analysis of gages on the James River in and near Albemarle County (Reference 4). In addition, a correlation analysis with other long-term gaging stations along the James River was made.

Discharges for some of the streams studied were developed in a series of Flood Plain Information reports prepared by the Norfolk COE and in Flood Insurance Studies for five counties or communities adjacent to, or contained within, Albemarle County (References 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 3, and 16).

The Hardware River drains the southern third of the county and the Rivanna River drains the northern two-thirds. Using procedures outlined in USGS Bulletin 17, statistical analyses were made for two gaging stations in the Hardware River Basin and for four stations in the Rivanna River Basin (Reference 17). The statistical parameters, which were the mean and standard deviations computed for each gage, and the physical parameter, the drainage area, were used to develop regression equations. After trying several groupings of the parameters, the best correlation was achieved by using separate equations for each of the basins.

Discharges computed for this study were compared with the discharges used in the previous studies. If the previous discharges met the criteria established by FEMA, they were used in this study. The only discharge that did not meet the acceptable limits were those for Moores Creek; therefore, the new discharges were used. The regression equations were also used to establish discharges for those streams not previously studied.

A summary of the drainage area-peak discharge relationships for the streams studied by detailed methods is shown in Table 1, "Summary of Discharges."

TABLE 1 - SUMMARY OF DISCHARGES

| FLOODING SOURCE AND LOCATION | DRAINAGE AREA (sq. miles) | PEAK DISCHARGES (cfs) 10-YEAR | 50-YEAR | 100-YEAR | 500-YEAR |
|---|---|---|---|---|---|
| NORTH FORK RIVANNA RIVER | | | | | |
| At mouth | 176 | 14,300 | 29,900 | 36,000 | 73,400 |
| MECHUMS RIVER | | | | | |
| At mouth | 99.1 | 9,800 | 20,100 | 25,000 | 47,800 |
| SOUTH FORK RIVANNA RIVER | | | | | |
| At mouth | 268 | 19,700 | 42,200 | 53,400 | 106,000 |
| IVY CREEK | | | | | |
| At mouth | 27.7 | 4,150 | 8,010 | 10,300 | 17,800 |
| LITTLE IVY CREEK | | | | | |
| At mouth | 3.9 | 1,090 | 1,930 | 2,410 | 3,860 |
| JUMPING BRANCH | | | | | |
| At mouth | 2.8 | 850 | 1,480 | 1,830 | 2,890 |
| POWELL CREEK | | | | | |
| At mouth | 3.8 | 1,070 | 1,880 | 2,340 | 3,740 |

TABLE 1 - SUMMARY OF DISCHARGES - continued

| FLOODING SOURCE AND LOCATION | DRAINAGE AREA (sq. miles) | PEAK DISCHARGES (cfs) 10-YEAR | 50-YEAR | 100-YEAR | 500-YEAR |
|---|---|---|---|---|---|
| RIVANNA RIVER | | | | | |
| Upstream of confluence of Moores Creek | 469 | 28,900 | 63,600 | 86,000 | 165,000 |
| MEADOW CREEK | | | | | |
| At State Route 631 | 8.4 | 2,700 | 4,500 | 6,000 | 9,000 |
| MOORES CREEK | | | | | |
| At mouth | 30.9 | 4,840 | 9,450 | 12,200 | 21,300 |
| BISCUIT RUN | | | | | |
| At mouth | 12.4 | 2,390 | 4,450 | 5,650 | 9,450 |
| JAMES RIVER | | | | | |
| Upstream of confluence with the Rivanna River | 5,056 | 114,400 | 195,200 | 245,800 | 423,700 |
| At mouth of the Hardware River | 4,749 | 107,900 | 184,100 | 232,000 | 398,100 |

3.2 Hydraulic Analyses

Analyses of the hydraulic characteristics of flooding from the sources studied were carried out to provide estimates of the elevations of floods of the selected recurrence intervals.

Cross sections and bridge data for the Mechums River, North and South Forks of the Rivanna River, the main stem of the Rivanna River, Meadow Creek, Moores Creek, the James River, and Biscuit Run were obtained from the Flood Plain Information reports and Flood Insurance Studies previously referenced. Field checks were made for bridge modification or additions made since completion of the reports. Cross sections and bridge data for Ivy Creek, Little Ivy Creek, Jumping Branch, and Powell Creek were obtained by field surveys.

Locations of selected cross sections used in the hydraulic analyses are shown on the Flood Profiles (Exhibit 1). For stream segments for which a floodway was computed (Section 4.2), selected cross section locations are also shown on the Flood Boundary and Floodway Map (Exhibit 2).

Water-surface elevations of floods of the selected recurrence intervals were computed using the COE HEC-2 step-backwater computer program (Reference 18). Starting water-surface elevations were taken from contiguous studies, or were calculated either by using

the slope/area method or at control structures (References 13 and 16). In the course of computing water-surface elevations for Powell Creek, it was found that Hollymead Drive controlled flows to the extent that storage-type analysis had to be used to establish elevations upstream. Flood profiles were drawn showing computed water-surface elevations for floods of the selected recurrence intervals.

When the Flood Plain Information reports were prepared for those streams for which data were available, channel roughness factors (Manning's "n") were determined from backwater computations made to produce profiles of past flooding. High-water data obtained following the June 1972 (Hurricane Agnes) flooding were used to further verify the validity of roughness factors. Field inspections, using these roughness values as guides were made to select values for those streams on which data were not available. The range for values of Manning's "n" used in the study are:

| Stream | Overbank "n" | Channel "n" |
|---|---|---|
| North Fork Rivanna River | 0.125 | 0.075 |
| Mechums River | 0.125 | 0.075 |
| South Fork Rivanna River | 0.080-0.120 | 0.040-0.060 |
| Ivy Creek | 0.070-0.100 | 0.045 |
| Little Ivy Creek | 0.070-0.100 | 0.045 |
| Jumping Branch | 0.075 | 0.045 |
| Powell Branch | 0.070-0.100 | 0.045 |
| Rivanna River | 0.060-0.075 | 0.035-0.040 |
| Meadow Creek | 0.075 | 0.035 |
| Moores Creek | 0.070-0.100 | 0.045 |
| Biscuit Run | 0.070 | 0.045 |
| James River | 0.040-0.060 | 0.021-0.038 |

For the streams studied by approximate methods, flood data were determined from high-water marks where available. When they were not available, slope/area computations were made for typical sections taken from topographic maps to establish average depth or width relations.

All elevations are referenced to the National Geodetic Vertical Datum of 1929 (NGVD). Elevation reference marks used in this study are shown on the maps.

The hydraulic analyses for this study were based on unobstructed flow. The flood elevations shown on the profiles are thus considered valid only if hydraulic structures remain unobstructed, operate properly, and do not fail.

## 4.0 FLOODPLAIN MANAGEMENT APPLICATIONS

The National Flood Insurance Program encourages State and local governments to adopt sound floodplain management programs. Therefore, each Flood Insurance Study produces maps designed to assist communities in developing floodplain management measures.

## 4.1 Flood Boundaries

To provide a national standard without regional discrimination, the 1 percent annual chance (100-year) flood has been adopted by FEMA as the base flood for floodplain management purposes. The 0.2 percent annual chance (500-year) flood is employed to indicate additional areas of flood risk in the community. For each stream studied in detail, the 100- and 500-year floodplain boundaries have been delineated using the flood elevations determined at each cross section. Between cross sections, the boundaries were interpolated using topographic maps (Reference 19).

For the streams studied by approximate methods, the 100-year floodplain boundaries were delineated using the topographic maps referenced above and high-water data, where available.

The 100- and 500-year floodplain boundaries are shown on the Flood Boundary and Floodway Map (Exhibit 2). In cases where the 100- and 500-year floodplain boundaries are close together, only the 100-year floodplain boundary has been shown. Small areas within the floodplain boundaries may lie above the flood elevations but cannot be shown due to limitations of the map scale and/or lack of detailed topographic data.

## 4.2 Floodways

Encroachment on floodplains, such as structures and fill, reduces flood-carrying capacity, increases flood heights and velocities, and increases flood hazards in areas beyond the encroachment itself. One aspect of floodplain management involves balancing the economic gain from floodplain development against the resulting increase in flood hazard. For purposes of the National Flood Insurance Program, a floodway is used as a tool to assist local communities in this aspect of floodplain management. Under this concept, the area of the 100-year floodplain is divided into a floodway and a floodway fringe. The floodway is the channel of a stream, plus any adjacent floodplain areas, that must be kept free of encroachment so that the 100-year flood can be carried without substantial increases in flood heights. Minimum federal standards limit such increases to 1.0 foot, provided that hazardous velocities are not produced. The floodways in this study are presented to local agencies as a minimum standard that can be adopted directly or that can be used as a basis for additional floodway studies.

The floodways presented in this study for the streams which are common to both Albemarle County and the City of Charlottesville were computed on the basis of equal conveyance reduction from each side of the floodplain. For those streams located wholly within the county, the county desired floodways symmetrical with the existing channels and having constant width. Where these objectives could be achieved, the county criteria were used. The results of these computations are tabulated at selected cross sections for each stream segment for which a floodway is computed (Table 2).

| FLOODING SOURCE | | FLOODWAY | | | BASE FLOOD WATER SURFACE ELEVATION | | | |
|---|---|---|---|---|---|---|---|---|
| CROSS SECTION | DISTANCE[1] | WIDTH (FT.) | SECTION AREA (SQ. FT.) | MEAN VELOCITY (F.P.S.) | REGULATORY (NGVD) | WITHOUT FLOODWAY (NGVD) | WITH FLOODWAY (NGVD) | INCREASE (FEET) |
| North Fork Rivanna River | | | | | | | | |
| A | 0.05 | 2,997 | 64,929 | 0.6 | 352.4 | 352.4 | 353.3 | 0.9 |
| B | 0.63 | 669 | 14,639 | 2.5 | 352.6 | 352.6 | 353.5 | 0.9 |
| C | 1.12 | 554 | 13,105 | 2.7 | 354.1 | 354.1 | 355.0 | 0.9 |
| D | 1.76 | 857 | 19,439 | 1.9 | 355.6 | 355.6 | 356.5 | 0.9 |
| E | 2.11 | 1,157 | 25,294 | 1.4 | 356.3 | 356.3 | 357.2 | 0.9 |
| F | 2.34 | 1,108 | 20,668 | 1.7 | 356.6 | 356.6 | 357.6 | 1.0 |
| G | 2.69 | 777 | 15,543 | 2.3 | 357.4 | 357.4 | 358.4 | 1.0 |
| H | 3.07 | 306 | 6,783 | 5.3 | 358.9 | 358.9 | 359.8 | 0.9 |
| I | 3.23 | 454 | 9,825 | 3.7 | 360.5 | 360.5 | 361.5 | 1.0 |
| J | 3.53 | 533 | 11,024 | 3.3 | 362.2 | 362.2 | 363.2 | 1.0 |
| Mechums River | | | | | | | | |
| A | 0.21 | 300 | 5,511 | 4.5 | 429.3 | 429.3 | 429.8 | 0.5 |
| B | 0.60 | 400 | 7,783 | 3.2 | 431.8 | 431.8 | 432.7 | 0.9 |
| C | 0.94 | 258 | 4,476 | 5.6 | 434.3 | 434.3 | 435.2 | 0.9 |
| D | 1.17 | 271 | 4,867 | 5.1 | 437.1 | 437.1 | 437.7 | 0.6 |
| E | 1.60 | 346 | 5,754 | 4.3 | 441.0 | 441.0 | 441.4 | 0.4 |
| F | 1.90 | 300 | 5,732 | 4.3 | 443.3 | 443.3 | 443.8 | 0.5 |

[1]Miles above mouth

TABLE 2

FEDERAL EMERGENCY MANAGEMENT AGENCY

ALBEMARLE COUNTY, VA
(UNINCORPORATED AREAS)

FLOODWAY DATA

NORTH FORK RIVANNA RIVER AND MECHUMS RIVER

| FLOODING SOURCE | | FLOODWAY | | | BASE FLOOD WATER SURFACE ELEVATION | | | |
|---|---|---|---|---|---|---|---|---|
| CROSS SECTION | DISTANCE[1] | WIDTH (FT.) | SECTION AREA (SQ. FT.) | MEAN VELOCITY (F.P.S.) | REGULATORY (NGVD) | WITHOUT FLOODWAY (NGVD) | WITH FLOODWAY (NGVD) | INCREASE (FEET) |
| Mechums River (continued) | | | | | | | | |
| G | 2.42 | 222 | 4,353 | 5.7 | 447.8 | 447.8 | 448.5 | 0.7 |
| H | 2.93 | 223 | 4,896 | 5.1 | 452.8 | 452.8 | 453.3 | 0.5 |
| I | 3.34 | 251 | 5,385 | 4.6 | 455.9 | 455.9 | 456.3 | 0.4 |
| J | 3.95 | 285 | 5,942 | 4.2 | 460.1 | 460.1 | 460.4 | 0.3 |
| K | 4.67 | 228 | 5,381 | 4.6 | 464.4 | 464.4 | 465.0 | 0.6 |
| L | 4.92 | 278 | 6,187 | 4.0 | 465.8 | 465.8 | 466.6 | 0.8 |
| M | 5.12 | 292 | 6,161 | 4.0 | 467.0 | 467.0 | 467.8 | 0.8 |
| N | 5.62 | 279 | 5,878 | 4.1 | 469.8 | 469.8 | 470.6 | 0.8 |
| O | 5.75 | 218 | 4,811 | 5.0 | 470.4 | 470.4 | 471.2 | 0.8 |
| P | 5.92 | 273 | 5,179 | 4.7 | 471.6 | 471.6 | 472.6 | 1.0 |
| Q | 6.32 | 238 | 4,626 | 5.1 | 474.8 | 474.8 | 475.5 | 0.7 |
| R | 6.87 | 240 | 4,629 | 5.0 | 479.2 | 479.2 | 479.5 | 0.3 |
| S | 7.42 | 250 | 4,906 | 4.7 | 483.2 | 483.2 | 483.5 | 0.3 |
| T | 7.75 | 495 | 11,215 | 2.1 | 484.9 | 484.9 | 485.2 | 0.3 |
| U | 7.98 | 430 | 8,574 | 2.7 | 485.4 | 485.4 | 485.8 | 0.4 |
| V | 8.35 | 347 | 5,235 | 4.4 | 486.6 | 486.6 | 487.3 | 0.7 |
| W | 8.80 | 435 | 7,245 | 3.1 | 490.3 | 490.3 | 490.8 | 0.5 |
| X | 9.02 | 352 | 5,736 | 3.9 | 491.8 | 491.8 | 492.3 | 0.5 |

[1]Miles above mouth

TABLE 2

FEDERAL EMERGENCY MANAGEMENT AGENCY

**ALBEMARLE COUNTY, VA**
**(UNINCORPORATED AREAS)**

**FLOODWAY DATA**

**MECHUMS RIVER**

| FLOODING SOURCE | | FLOODWAY | | | BASE FLOOD WATER SURFACE ELEVATION | | | |
|---|---|---|---|---|---|---|---|---|
| CROSS SECTION | DISTANCE[1] | WIDTH (FT.) | SECTION AREA (SQ. FT.) | MEAN VELOCITY (F.P.S.) | REGULATORY (NGVD) | WITHOUT FLOODWAY (NGVD) | WITH FLOODWAY (NGVD) | INCREASE (FEET) |
| Mechums River (continued) | | | | | | | | |
| Y | 9.52 | 322 | 5,566 | 4.0 | 496.1 | 496.1 | 496.3 | 0.2 |
| Z | 10.07 | 507 | 9,160 | 2.4 | 498.5 | 498.5 | 499.1 | 0.6 |
| AA | 10.27 | 578 | 8,877 | 2.4 | 499.0 | 499.0 | 499.8 | 0.8 |
| AB | 10.55 | 317 | 4,486 | 4.4 | 501.5 | 501.5 | 502.4 | 0.9 |
| AC | 10.89 | 820 | 10,811 | 1.7 | 503.5 | 503.5 | 504.4 | 0.9 |
| AD | 11.52 | 501 | 6,136 | 2.8 | 505.8 | 505.8 | 506.8 | 1.0 |
| AE | 11.89 | 420 | 5,176 | 3.1 | 508.8 | 508.8 | 509.6 | 0.8 |
| AF | 12.31 | 587 | 5,295 | 2.8 | 512.2 | 512.2 | 513.0 | 0.8 |
| AG | 12.79 | 524 | 4,972 | 2.9 | 517.4 | 517.4 | 517.6 | 0.2 |
| AH | 13.20 | 366 | 4,189 | 3.3 | 521.4 | 521.4 | 521.8 | 0.4 |
| AI | 13.38 | 609 | 5,615 | 2.5 | 523.0 | 523.0 | 523.7 | 0.7 |
| AJ | 13.70 | 185 | 2,513 | 5.5 | 529.1 | 529.1 | 529.1 | 0.0 |
| AK | 13.92 | 239 | 3,253 | 4.2 | 531.8 | 531.8 | 532.7 | 0.9 |
| AL | 14.16 | 299 | 3,792 | 3.6 | 534.8 | 534.8 | 535.3 | 0.5 |
| AM | 14.62 | 151 | 2,203 | 6.1 | 541.1 | 541.1 | 541.1 | 0.0 |
| AN | 15.15 | 287 | 3,927 | 3.4 | 547.2 | 547.2 | 547.9 | 0.7 |
| AO | 15.69 | 307 | 4,185 | 3.1 | 550.5 | 550.5 | 551.5 | 1.0 |

[1] Miles above mouth

TABLE 2

FEDERAL EMERGENCY MANAGEMENT AGENCY

ALBEMARLE COUNTY, VA
(UNINCORPORATED AREAS)

FLOODWAY DATA

MECHUMS RIVER

| FLOODING SOURCE | | FLOODWAY | | | BASE FLOOD WATER SURFACE ELEVATION | | | |
|---|---|---|---|---|---|---|---|---|
| CROSS SECTION | DISTANCE[1] | WIDTH (FT.) | SECTION AREA (SQ. FT.) | MEAN VELOCITY (F.P.S.) | REGULATORY (NGVD) | WITHOUT FLOODWAY (NGVD) | WITH FLOODWAY (NGVD) | INCREASE (FEET) |
| South Fork Rivanna River | | | | | | | | |
| A | 0.82 | 366 | 8,518 | 6.3 | 354.7 | 354.7 | 355.1 | 0.4 |
| B | 1.10 | 385 | 8,705 | 6.0 | 354.7 | 354.7 | 355.2 | 0.5 |
| C | 1.24 | 420 | 9,686 | 5.4 | 356.0 | 356.0 | 356.9 | 0.9 |
| D | 1.53 | 1,026 | 22,736 | 2.3 | 358.8 | 358.8 | 359.5 | 0.7 |
| E | 1.88 | 1,848 | 30,144 | 1.7 | 359.4 | 359.4 | 360.1 | 0.7 |
| F | 2.56 | 1,487 | 25,402 | 2.0 | 360.4 | 360.4 | 361.4 | 1.0 |
| G | 2.77 | 1,125 | 18,732 | 2.7 | 360.9 | 360.9 | 361.9 | 1.0 |
| H | 2.97 | 392 | 9,195 | 5.5 | 364.3 | 364.3 | 365.1 | 0.8 |
| I | 3.24 | 335 | 8,732 | 5.8 | 366.1 | 366.1 | 366.9 | 0.8 |
| J | 7.17 | 580 | 11,013 | 4.2 | 391.8 | 391.8 | 392.7 | 0.9 |
| K | 7.45 | 465 | 8,213 | 5.7 | 392.2 | 392.2 | 393.0 | 0.8 |
| L | 7.82 | 538 | 8,132 | 5.7 | 393.3 | 393.3 | 394.0 | 0.7 |
| M | 8.05 | 436 | 7,324 | 6.3 | 394.1 | 394.1 | 394.7 | 0.6 |
| N | 8.43 | 524 | 6,423 | 7.1 | 396.0 | 396.0 | 396.3 | 0.3 |
| O | 8.80 | 393 | 7,207 | 6.3 | 399.2 | 399.2 | 399.4 | 0.2 |
| P | 9.06 | 399 | 6,983 | 6.4 | 400.6 | 400.6 | 400.8 | 0.2 |
| Q | 9.40 | 518 | 7,485 | 5.9 | 402.2 | 402.2 | 402.3 | 0.1 |
| R | 9.67 | 471 | 7,974 | 5.5 | 403.9 | 403.9 | 404.1 | 0.2 |

[1] Miles above mouth

TABLE 2

FEDERAL EMERGENCY MANAGEMENT AGENCY

**ALBEMARLE COUNTY, VA**
(UNINCORPORATED AREAS)

**FLOODWAY DATA**

**SOUTH FORK RIVANNA RIVER**

| FLOODING SOURCE | | FLOODWAY | | | BASE FLOOD WATER SURFACE ELEVATION | | | |
|---|---|---|---|---|---|---|---|---|
| CROSS SECTION | DISTANCE | WIDTH (FT.) | SECTION AREA (SQ. FT.) | MEAN VELOCITY (F.P.S.) | REGULATORY (NGVD) | WITHOUT FLOODWAY (NGVD) | WITH FLOODWAY (NGVD) | INCREASE (FEET) |
| South Fork Rivanna River (continued) | | | | | | | | |
| S | 10.08[1] | 496 | 8,238 | 5.2 | 407.5 | 407.5 | 407.6 | 0.1 |
| T | 10.32[1] | 435 | 7,895 | 5.4 | 409.2 | 409.2 | 409.3 | 0.1 |
| U | 10.65[1] | 500 | 8,621 | 4.8 | 411.3 | 411.3 | 411.5 | 0.2 |
| V | 10.89[1] | 397 | 7,042 | 5.8 | 412.2 | 412.2 | 412.9 | 0.7 |
| W | 11.32[1] | 500 | 9,233 | 4.4 | 416.0 | 416.0 | 416.7 | 0.7 |
| X | 11.62[1] | 353 | 5,913 | 6.8 | 418.2 | 418.2 | 419.0 | 0.8 |
| Y | 11.91[1] | 339 | 6,731 | 5.8 | 422.4 | 422.4 | 422.8 | 0.4 |
| Z | 12.33[1] | 337 | 7,180 | 5.3 | 426.8 | 426.8 | 427.1 | 0.3 |
| Ivy Creek | | | | | | | | |
| A | 7,450[2] | 264 | 1,870 | 5.5 | 391.0 | 388.0[3] | 388.4 | 0.4 |
| B | 9,300[2] | 260 | 2,141 | 4.3 | 391.4 | 391.4 | 392.0 | 0.6 |
| C | 11,550[2] | 220 | 1,999 | 4.6 | 394.6 | 394.6 | 395.6 | 1.0 |
| D | 13,375[2] | 200 | 1,935 | 4.8 | 398.5 | 398.5 | 398.9 | 0.4 |
| E | 15,700[2] | 154 | 1,337 | 6.7 | 403.4 | 403.4 | 404.2 | 0.8 |
| F | 21,750[2] | 173 | 1,301 | 6.9 | 419.3 | 419.3 | 419.8 | 0.5 |
| G | 26,300[2] | 200 | 1,471 | 6.1 | 432.3 | 432.3 | 432.4 | 0.1 |

[1]Miles above mouth
[2]Feet above mouth
[3]Elevations computed without consideration of backwater effects from South Fork Rivanna River

TABLE 2

FEDERAL EMERGENCY MANAGEMENT AGENCY

**ALBEMARLE COUNTY, VA**
**(UNINCORPORATED AREAS)**

**FLOODWAY DATA**

**SOUTH FORK RIVANNA RIVER AND IVY CREEK**

| FLOODING SOURCE | | FLOODWAY | | | BASE FLOOD WATER SURFACE ELEVATION | | | |
|---|---|---|---|---|---|---|---|---|
| CROSS SECTION | DISTANCE[1] | WIDTH (FT.) | SECTION AREA (SQ. FT.) | MEAN VELOCITY (F.P.S.) | REGULATORY (NGVD) | WITHOUT FLOODWAY (NGVD) | WITH FLOODWAY (NGVD) | INCREASE (FEET) |
| Ivy Creek (continued) | | | | | | | | |
| H | 30,250 | 171 | 1,000 | 7.8 | 442.7 | 442.7 | 442.8 | 0.1 |
| I | 33,550 | 163 | 1,354 | 5.0 | 451.9 | 451.9 | 452.7 | 0.8 |
| J | 35,850 | 320 | 1,942 | 3.5 | 456.1 | 456.1 | 456.9 | 0.8 |
| K | 39,600 | 330 | 1,358 | 5.0 | 463.8 | 463.8 | 464.8 | 1.0 |
| L | 43,650 | 300 | 1,578 | 4.3 | 474.2 | 474.2 | 474.4 | 0.2 |
| M | 44,900 | 276 | 845 | 4.3 | 477.7 | 477.7 | 478.7 | 1.0 |
| N | 47,350 | 200 | 2,511 | 1.4 | 496.1 | 496.1 | 496.1 | 0.0 |
| O | 52,150 | 200 | 628 | 4.5 | 509.2 | 509.2 | 509.4 | 0.2 |
| P | 55,000 | 211 | 513 | 5.5 | 524.8 | 524.8 | 524.8 | 0.0 |
| Q | 56,650 | 133 | 529 | 5.3 | 535.2 | 535.2 | 536.2 | 1.0 |
| R | 58,300 | 146 | 602 | 4.7 | 545.0 | 545.0 | 545.6 | 0.6 |
| Little Ivy Creek | | | | | | | | |
| A | 1,000 | 200 | 605 | 4.0 | 477.8 | 477.8 | 478.8 | 1.0 |
| B | 1,725 | 202 | 365 | 3.9 | 481.6 | 481.6 | 482.2 | 0.6 |
| C | 2,250 | 290 | 4,181 | 0.3 | 500.8 | 500.8 | 501.8 | 1.0 |
| D | 5,025 | 200 | 1,699 | 0.8 | 513.2 | 513.2 | 513.2 | 0.0 |

[1]Feet above mouth

TABLE 2

FEDERAL EMERGENCY MANAGEMENT AGENCY

ALBEMARLE COUNTY, VA
(UNINCORPORATED AREAS)

FLOODWAY DATA

IVY CREEK AND LITTLE IVY CREEK

| FLOODING SOURCE | | FLOODWAY | | | BASE FLOOD WATER SURFACE ELEVATION | | | |
|---|---|---|---|---|---|---|---|---|
| CROSS SECTION | DISTANCE[1] | WIDTH (FT.) | SECTION AREA (SQ. FT.) | MEAN VELOCITY (F.P.S.) | REGULATORY (NGVD) | WITHOUT FLOODWAY (NGVD) | WITH FLOODWAY (NGVD) | INCREASE (FEET) |
| Little Ivy Creek (continued) | | | | | | | | |
| E | 6,600 | 68 | 173 | 6.2 | 515.2 | 515.2 | 515.2 | 0.0 |
| F | 7,600 | 89 | 153 | 7.1 | 523.9 | 523.9 | 524.0 | 0.1 |
| G | 8,450 | 107 | 201 | 5.4 | 531.8 | 531.8 | 531.8 | 0.0 |
| Jumping Branch | | | | | | | | |
| A | 450 | 112 | 621 | 2.9 | 391.0 | 388.0[2] | 389.0 | 1.0 |
| B | 2,400 | 70 | 236 | 7.8 | 423.0 | 423.0 | 423.0 | 0.0 |
| C | 3,775 | 60 | 291 | 6.3 | 436.2 | 436.2 | 436.5 | 0.3 |
| D | 6,400 | 70 | 347 | 5.0 | 449.0 | 449.0 | 449.4 | 0.4 |
| E | 8,075 | 62 | 262 | 6.0 | 457.2 | 457.2 | 457.8 | 0.6 |
| F | 10,000 | 70 | 216 | 5.0 | 473.3 | 473.3 | 474.2 | 0.9 |
| G | 11,875 | 65 | 174 | 5.4 | 485.3 | 485.3 | 485.4 | 0.1 |
| Powell Creek | | | | | | | | |
| A | 1,350 | 100 | 393 | 5.9 | 357.2 | 337.1[2] | 337.6 | 0.5 |
| B | 3,600 | 100 | 471 | 4.8 | 357.2 | 347.9[2] | 348.6 | 0.7 |
| C | 7,400 | 100 | 471 | 4.2 | 370.4 | 370.4 | 371.3 | 0.9 |

[1]Feet above mouth

[2]Elevations computed without consideration of backwater effects from South Fork Rivanna River

TABLE 2

FEDERAL EMERGENCY MANAGEMENT AGENCY

ALBEMARLE COUNTY, VA
(UNINCORPORATED AREAS)

FLOODWAY DATA

LITTLE IVY CREEK, JUMPING BRANCH, AND POWELL CREEK

| FLOODING SOURCE | | FLOODWAY | | | BASE FLOOD WATER SURFACE ELEVATION | | | |
|---|---|---|---|---|---|---|---|---|
| CROSS SECTION | DISTANCE | WIDTH (FT.) | SECTION AREA (SQ. FT.) | MEAN VELOCITY (F.P.S.) | REGULATORY (NGVD) | WITHOUT FLOODWAY (NGVD) | WITH FLOODWAY (NGVD) | INCREASE (FEET) |
| Powell Creek (continued) | | | | | | | | |
| D | 10,850[1] | 81 | 273 | 6.6 | 393.0 | 393.0 | 393.0 | 0.0 |
| E | 13,825[1] | 509 | 7,023 | 0.1 | 436.0 | 436.0 | 437.0 | 1.0 |
| F | 16,075[1] | 50 | 137 | 6.1 | 438.6 | 438.6 | 438.6 | 0.0 |
| G | 17,000[1] | 70 | 137 | 6.0 | 453.5 | 453.5 | 453.5 | 0.0 |
| Rivanna River | | | | | | | | |
| A | 32.81[2] | 476 | 9,640 | 8.8 | 299.7 | 299.7 | 300.3 | 0.6 |
| B | 33.40[2] | 386 | 8,521 | 10.0 | 303.6 | 303.6 | 303.9 | 0.3 |
| C | 34.18[2] | 352 | 7,566 | 11.2 | 309.5 | 309.5 | 309.7 | 0.2 |
| D | 34.54[2] | 400 | 9,227 | 9.2 | 312.5 | 312.5 | 313.3 | 0.8 |
| E | 35.11[2] | 392 | 7,916 | 10.7 | 315.7 | 315.7 | 316.5 | 0.8 |
| F | 35.48[2] | 363 | 6,853 | 12.4 | 319.1 | 319.1 | 319.7 | 0.6 |
| G | 35.98[2] | 339 | 8,232 | 10.3 | 325.0 | 325.0 | 325.9 | 0.9 |
| H | 36.22[2] | 442 | 12,617 | 6.7 | 328.4 | 328.4 | 329.3 | 0.9 |
| I | 36.52[2] | 423/200[3] | 9,046 | 9.4 | 329.3 | 329.3 | 330.2 | 0.9 |
| J | 36.91[2] | 773/180[3] | 15,789 | 5.4 | 332.6 | 332.6 | 333.4 | 0.8 |
| K | 37.34[2] | 567/460[3] | 13,246 | 6.4 | 333.8 | 333.8 | 334.6 | 0.8 |
| L | 37.81[2] | 443/250[3] | 7,331 | 11.6 | 335.3 | 335.3 | 335.9 | 0.6 |

[1]Feet above mouth
[2]Miles above mouth
[3]Width/width within county boundary

TABLE 2

FEDERAL EMERGENCY MANAGEMENT AGENCY

**ALBEMARLE COUNTY, VA**
**(UNINCORPORATED AREAS)**

**FLOODWAY DATA**

**POWELL CREEK AND RIVANNA RIVER**

| FLOODING SOURCE | | FLOODWAY | | | BASE FLOOD WATER SURFACE ELEVATION | | | |
|---|---|---|---|---|---|---|---|---|
| CROSS SECTION | DISTANCE | WIDTH (FT.) | SECTION AREA (SQ. FT.) | MEAN VELOCITY (F.P.S.) | REGULATORY (NGVD) | WITHOUT FLOODWAY (NGVD) | WITH FLOODWAY (NGVD) | INCREASE (FEET) |
| Rivanna River (continued) | | | | | | | | |
| M | 38.37[1] | 490/260[3] | 12,377 | 6.9 | 341.5 | 341.5 | 342.3 | 0.8 |
| N | 38.98[1] | 441 | 10,937 | 7.8 | 343.2 | 343.2 | 344.1 | 0.9 |
| O | 39.31[1] | 636 | 15,999 | 5.3 | 345.4 | 345.4 | 346.1 | 0.7 |
| P | 39.57[1] | 498 | 11,556 | 7.4 | 345.7 | 345.7 | 346.5 | 0.8 |
| Q | 40.14[1] | 626 | 13,996 | 6.1 | 348.0 | 348.0 | 348.6 | 0.6 |
| R | 40.35[1] | 1,001 | 23,856 | 3.6 | 349.5 | 349.5 | 349.9 | 0.4 |
| S | 40.89[1] | 491 | 9,562 | 8.9 | 349.5 | 349.5 | 349.9 | 0.4 |
| T | 41.27[1] | 1,000 | 24,504 | 3.5 | 352.1 | 352.1 | 353.0 | 0.9 |
| Meadow Creek | | | | | | | | |
| A | 5,020[2] | 87 | 789 | 7.6 | 346.8 | 346.8 | 347.1 | 0.3 |
| B | 6,360[2] | 120 | 1,377 | 4.4 | 358.7 | 358.7 | 358.7 | 0.0 |
| C | 7,700[2] | 97 | 533 | 11.3 | 359.8 | 359.8 | 359.8 | 0.0 |
| D | 9,180[2] | 150 | 960 | 6.3 | 368.5 | 368.5 | 369.0 | 0.5 |
| E | 10,050[2] | 100[4] | 606 | 9.9 | 372.1 | 372.1 | 372.8 | 0.7 |
| F | 15,650[2] | 98[4] | 375 | 10.7 | 395.2 | 395.2 | 395.2 | 0.0 |

[1]Miles above mouth
[2]Feet above mouth
[3]Width/width within county boundary
[4]This width extends beyond county boundary

TABLE 2

FEDERAL EMERGENCY MANAGEMENT AGENCY

ALBEMARLE COUNTY, VA
(UNINCORPORATED AREAS)

FLOODWAY DATA

RIVANNA RIVER AND MEADOW CREEK

| FLOODING SOURCE | | FLOODWAY | | | BASE FLOOD WATER SURFACE ELEVATION | | | |
|---|---|---|---|---|---|---|---|---|
| CROSS SECTION | DISTANCE[1] | WIDTH (FT.) | SECTION AREA (SQ. FT.) | MEAN VELOCITY (F.P.S.) | REGULATORY (NGVD) | WITHOUT FLOODWAY (NGVD) | WITH FLOODWAY (NGVD) | INCREASE (FEET) |
| Moores Creek | | | | | | | | |
| A | 1,175 | 110 | 1,132 | 10.8 | 325.1 | 314.0[3] | 314.5 | 0.5 |
| B | 3,225 | 140 | 2,119 | 5.8 | 325.1 | 321.8[3] | 322.6 | 0.8 |
| C | 4,500 | 774 | 6,427 | 1.8 | 325.1 | 323.4[3] | 324.1 | 0.7 |
| D | 6,075 | 107[2] | 1,107 | 10.5 | 326.9 | 326.9 | 327.2 | 0.3 |
| E | 7,590 | 222[2] | 1,777 | 6.4 | 333.2 | 333.2 | 333.7 | 0.5 |
| F | 8,550 | 426[2] | 3,146 | 3.6 | 337.7 | 337.7 | 338.1 | 0.4 |
| G | 9,750 | 128[2] | 1,145 | 9.9 | 339.4 | 339.4 | 339.7 | 0.3 |
| H | 10,775 | 118[2] | 1,007 | 11.2 | 347.0 | 347.0 | 347.4 | 0.4 |
| I | 11,400 | 170[2] | 1,719 | 6.3 | 352.1 | 352.1 | 352.2 | 0.1 |
| J | 12,550 | 194[2] | 2,085 | 5.2 | 354.4 | 354.4 | 354.7 | 0.3 |
| K | 12,950 | 110[2] | 1,246 | 8.7 | 355.2 | 355.2 | 355.4 | 0.2 |
| L | 14,640 | 254[2] | 2,431 | 4.4 | 359.9 | 359.9 | 360.2 | 0.3 |
| M | 16,475 | 165 | 841 | 12.7 | 364.7 | 364.7 | 364.7 | 0.0 |
| N | 17,500 | 125 | 1,516 | 6.9 | 371.2 | 371.2 | 371.2 | 0.0 |
| O | 18,840 | 171 | 1,516 | 6.9 | 374.1 | 374.1 | 374.3 | 0.2 |
| P | 20,600 | 163 | 1,929 | 5.4 | 377.7 | 377.7 | 378.1 | 0.4 |
| Q | 21,900 | 132[2] | 1,586 | 6.4 | 379.4 | 379.4 | 379.8 | 0.4 |
| R | 23,775 | 649[2] | 4,939 | 1.5 | 386.3 | 386.3 | 386.4 | 0.1 |
| S | 25,250 | 152[2] | 1,182 | 5.8 | 386.6 | 386.6 | 386.7 | 0.1 |

[1]Feet above mouth

[2]This width extends beyond county boundary

[3]Elevations computed without consideration of backwater effects from Rivanna River

TABLE 2

FEDERAL EMERGENCY MANAGEMENT AGENCY

**ALBEMARLE COUNTY, VA**
**(UNINCORPORATED AREAS)**

**FLOODWAY DATA**

**MOORES CREEK**

| FLOODING SOURCE | | FLOODWAY | | | BASE FLOOD WATER SURFACE ELEVATION | | | |
|---|---|---|---|---|---|---|---|---|
| CROSS SECTION | DISTANCE[1] | WIDTH (FT.) | SECTION AREA (SQ. FT.) | MEAN VELOCITY (F.P.S.) | REGULATORY (NGVD) | WITHOUT FLOODWAY (NGVD) | WITH FLOODWAY (NGVD) | INCREASE (FEET) |
| Moores Creek (continued) | | | | | | | | |
| T | 27,300 | 304[2] | 2,096 | 3.3 | 390.6 | 390.6 | 391.1 | 0.5 |
| U | 27,800 | 318[2] | 2,136 | 2.9 | 394.6 | 394.6 | 394.7 | 0.1 |
| V | 29,450 | * | 496 | 12.3 | 395.2 | 395.2 | 395.5 | 0.3 |
| W | 29,800 | * | 739 | 8.3 | 399.1 | 399.1 | 399.4 | 0.3 |
| X | 30,875 | 139[2] | 1,152 | 4.4 | 404.9 | 404.9 | 405.2 | 0.3 |
| Y | 33,100 | 104 | 637 | 6.9 | 410.8 | 410.8 | 411.2 | 0.4 |
| Z | 35,800 | 73 | 475 | 7.6 | 429.0 | 429.0 | 429.1 | 0.1 |
| AA | 39,000 | 62 | 519 | 5.2 | 445.9 | 445.9 | 445.9 | 0.0 |
| AB | 39,850 | 52 | 363 | 7.4 | 449.4 | 449.4 | 450.4 | 1.0 |
| AC | 40,750 | 65 | 336 | 8.0 | 456.1 | 456.1 | 456.1 | 0.0 |
| AD | 42,775 | 42 | 212 | 10.5 | 468.5 | 468.5 | 468.6 | 0.1 |
| AE | 44,900 | 94 | 269 | 8.3 | 484.0 | 484.0 | 484.1 | 0.1 |
| AF | 45,700 | 43 | 296 | 7.5 | 492.4 | 492.4 | 492.4 | 0.0 |
| AG | 47,350 | 68 | 276 | 8.0 | 518.8 | 518.8 | 518.9 | 0.1 |
| AH | 48,200 | 100 | 409 | 5.4 | 524.5 | 524.5 | 524.6 | 0.1 |
| AI | 49,990 | 140 | 640 | 3.5 | 536.7 | 536.7 | 537.2 | 0.5 |
| AJ | 51,430 | 87 | 234 | 9.5 | 547.6 | 547.6 | 547.6 | 0.0 |

[1] Feet above mouth
[2] This width extends beyond county boundary
*Floodway coincident with channel banks

| FLOODING SOURCE | | FLOODWAY | | | BASE FLOOD WATER SURFACE ELEVATION | | | |
|---|---|---|---|---|---|---|---|---|
| CROSS SECTION | DISTANCE[1] | WIDTH (FT.) | SECTION AREA (SQ. FT.) | MEAN VELOCITY (F.P.S.) | REGULATORY (NGVD) | WITHOUT FLOODWAY (NGVD) | WITH FLOODWAY (NGVD) | INCREASE (FEET) |
| Biscuit Run | | | | | | | | |
| A | 1,000 | 151 | 1,344 | 4.2 | 383.2 | 383.2 | 384.2 | 1.0 |
| B | 1,925 | 229 | 1,857 | 3.0 | 384.4 | 384.4 | 385.2 | 0.8 |
| C | 4,100 | 236 | 1,833 | 2.8 | 386.3 | 386.3 | 387.2 | 0.9 |
| D | 4,750 | 255 | 1,713 | 3.0 | 387.1 | 387.1 | 387.9 | 0.8 |
| E | 7,100 | 255 | 1,363 | 3.4 | 391.9 | 391.9 | 391.9 | 0.0 |
| F | 8,075 | 226 | 1,079 | 4.2 | 394.3 | 394.3 | 394.4 | 0.1 |
| G | 9,875 | 287 | 1,637 | 2.6 | 397.7 | 397.7 | 398.3 | 0.6 |
| H | 11,600 | 225 | 848 | 4.7 | 401.2 | 401.2 | 402.0 | 0.8 |
| I | 13,700 | 200 | 983 | 3.7 | 409.6 | 409.6 | 409.9 | 0.3 |
| J | 14,975 | 150 | 721 | 4.8 | 412.5 | 412.5 | 413.5 | 1.0 |

[1] Feet above mouth

TABLE 2

FEDERAL EMERGENCY MANAGEMENT AGENCY

**ALBEMARLE COUNTY, VA**
**(UNINCORPORATED AREAS)**

**FLOODWAY DATA**

**BISCUIT RUN**

| FLOODING SOURCE | | FLOODWAY | | | BASE FLOOD WATER SURFACE ELEVATION | | | |
|---|---|---|---|---|---|---|---|---|
| CROSS SECTION | DISTANCE[1] | WIDTH[2] (FEET) | SECTION AREA (SQUARE FEET) | MEAN VELOCITY (FEET PER SECOND) | REGULATORY | WITHOUT FLOODWAY | WITH FLOODWAY | INCREASE |
| | | | | | (FEET NGVD) | | | |
| James River | | | | | | | | |
| A | 185.67 | 1,408 | 33,355 | 6.7 | 288.8 | 288.8 | 289.6 | 0.8 |
| B | 186.55 | 1,212 | 29,059 | 7.7 | 290.6 | 290.6 | 291.4 | 0.8 |
| C | 187.28 | 1,476 | 29,725 | 7.5 | 292.3 | 292.3 | 293.1 | 0.8 |
| D | 188.23 | 1,252 | 33,186 | 6.7 | 295.1 | 295.1 | 295.8 | 0.7 |
| E | 189.27 | 2,204 | 37,392 | 6.0 | 297.5 | 297.5 | 298.1 | 0.6 |
| F | 189.88 | 2,083 | 35,261 | 6.4 | 299.1 | 299.1 | 299.8 | 0.7 |
| G | 190.84 | 1,850 | 38,433 | 5.8 | 301.1 | 301.1 | 301.8 | 0.7 |
| H | 191.71 | 1,350 | 29,085 | 7.7 | 302.9 | 302.9 | 303.5 | 0.6 |
| I | 192.59 | 1,673 | 28,510 | 7.9 | 306.1 | 306.1 | 306.6 | 0.5 |
| J | 193.32 | 1,249 | 22,380 | 10.0 | 308.7 | 308.7 | 309.2 | 0.5 |
| K | 194.00 | 2,822 | 39,020 | 5.7 | 312.3 | 312.3 | 313.0 | 0.7 |
| L | 194.90 | 1,580 | 25,407 | 8.8 | 314.7 | 314.7 | 315.3 | 0.6 |
| M | 195.78 | 1,280 | 24,869 | 9.0 | 318.5 | 318.5 | 319.2 | 0.7 |
| N | 196.50 | 2,530 | 48,658 | 4.6 | 321.8 | 321.8 | 322.6 | 0.8 |

[1]Miles above mouth
[2]This width extends beyond county boundary

TABLE 2

FEDERAL EMERGENCY MANAGEMENT AGENCY

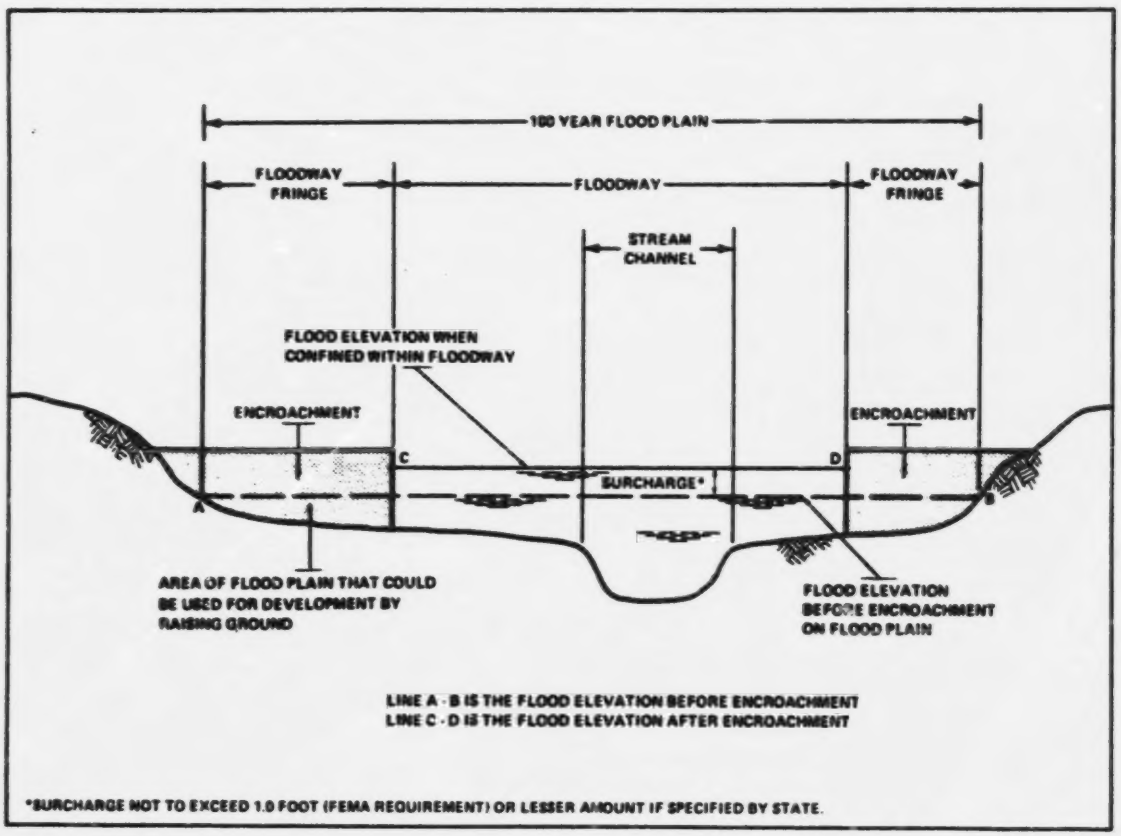
**ALBEMARLE COUNTY, VA**
**(UNINCORPORATED AREAS)**

**FLOODWAY DATA**

**JAMES RIVER**

As shown on the Flood Boundary and Floodway Map (Exhibit 2), the floodway boundaries were computed at cross sections. Between cross sections, the boundaries were interpolated. In cases where the floodway and 100-year floodplain boundaries are either close together or collinear, only the floodway boundary has been shown.

The area between the floodway and 100-year floodplain boundaries is termed the floodway fringe. The floodway fringe encompasses the portion of the floodplain that could be completely obstructed without increasing the water-surface elevation of the 100-year flood by more than 1.0 foot at any point. Typical relationships between the floodway and the floodway fringe and their significance to floodplain development are shown in Figure 2. Portions of the floodways computed for the Rivanna River, Meadow Creek, the James River, and Moores Creek extend beyond the county boundary.


100 YEAR FLOOD PLAIN
FLOODWAY FRINGE
FLOODWAY
FLOODWAY FRINGE
STREAM CHANNEL
FLOOD ELEVATION WHEN CONFINED WITHIN FLOODWAY
ENCROACHMENT
ENCROACHMENT
C
D
SURCHARGE*
A
AREA OF FLOOD PLAIN THAT COULD BE USED FOR DEVELOPMENT BY RAISING GROUND
FLOOD ELEVATION BEFORE ENCROACHMENT ON FLOOD PLAIN
LINE A - B IS THE FLOOD ELEVATION BEFORE ENCROACHMENT
LINE C - D IS THE FLOOD ELEVATION AFTER ENCROACHMENT
*SURCHARGE NOT TO EXCEED 1.0 FOOT (FEMA REQUIREMENT) OR LESSER AMOUNT IF SPECIFIED BY STATE.

FLOODWAY SCHEMATIC

Figure 2

Near the mouths of streams studied in detail, floodway computations are made without regard to flood elevations on the receiving water body. Therefore, "Without Floodway" elevations presented in Table 2 for certain downstream cross sections of Ivy Creek, Jumping Branch, Powell Creek, and Moores Creek are lower than the regulatory flood elevations in that area, which must take into account the 100-year flooding due to backwater from other sources.

## 5.0 INSURANCE APPLICATION

To establish actuarial insurance rates, data from the engineering study must be transformed into flood insurance criteria. This process includes the determination of reaches, Flood Hazard Factors, and flood insurance zone designations for each flooding source studied in detail in Albemarle County.

### 5.1 Reach Determinations

Reaches are defined as sections of floodplain that have relatively the same flood hazard, based on the average weighted difference in water-surface elevations between the 10- and 100-year floods. This difference may not have a variation greater than that indicated in the following tabulation for more than 20 percent of the reach:

| Average Difference Between 10- and 100-Year Floods | Variation |
|---|---|
| Less than 2 feet | 0.5 foot |
| 2 to 7 feet | 1.0 foot |
| 7.1 to 12 feet | 2.0 feet |
| More than 12 feet | 3.0 feet |

The locations of the reaches determined for the flooding sources of the unincorporated areas of Albemarle County are shown on the Flood Profiles (Exhibit 1) and summarized in Table 3.

### 5.2 Flood Hazard Factors

The Flood Hazard Factor (FHF) is used to establish relationships between depth and frequency of flooding in any reach. This relationship is then used with depth-damage relationships for various classes of structures to establish actuarial insurance rate tables.

The FHF for a reach is the average weighted difference between the 10- and 100-year flood water-surface elevations rounded to the nearest one- half foot, multiplied by 10, and shown as a three-digit code. For example, if the difference between water-surface elevations of the 10- and 100-year floods is 0.7 foot, the FHF is 005; if the difference is 1.4 feet, the FHF is 015; if the difference is 5.0 feet, the FHF is 050. When the difference between the 10- and 100-year flood water-surface elevations is greater than 10.0 feet, it is rounded to the nearest whole foot.

| FLOODING SOURCE | PANEL[1] | ELEVATION DIFFERENCE[2] BETWEEN 1.0% (100-YEAR) FLOOD AND | | | FHF | ZONE | BASE FLOOD ELEVATION[3] (NGVD) |
|---|---|---|---|---|---|---|---|
| | | 10% (10 YR.) | 2% (50 YR.) | 0.2% (500 YR.) | | | |
| North Fork Rivanna River | | | | | | | |
| Reach 1 | 230,235 | -9.8 | -3.1 | +9.3 | 100 | A20 | Varies |
| Mechums River | | | | | | | |
| Reach 1 | 095,185,190, 195,205,210 | -9.0 | -3.1 | +7.8 | 090 | A18 | Varies |
| South Fork Rivanna River | | | | | | | |
| Reach 1 | 230 | -11.2 | -3.6 | +10.4 | 110 | A21 | Varies |
| Reach 2 | 095,210,230 | -5.0 | -1.5 | +6.1 | 050 | A10 | Varies |
| Reach 3 | 095,210 | -9.7 | -2.8 | +9.5 | 095 | A19 | Varies |
| Ivy Creek | | | | | | | |
| Reach 1 | 210 | -3.8 | -1.2 | +3.2 | 040 | A8 | Varies |
| Reach 2 | 210 | -4.8 | -1.6 | +2.9 | 050 | A10 | Varies |
| Reach 3 | 205,210,215 | -2.2 | -0.7 | +1.9 | 020 | A4 | Varies |
| Reach 4 | 215 | -7.1 | -2.4 | +6.5 | 070 | A14 | Varies |
| Reach 5 | 215 | -3.5 | -1.2 | +2.6 | 035 | A7 | Varies |
| Reach 6 | 215 | -2.2 | -0.7 | +1.4 | 020 | A4 | Varies |

[1]Flood Insurance Rate Map Panel
[2]Weighted average
[3]Rounded to the nearest foot - see map

TABLE 3

FEDERAL EMERGENCY MANAGEMENT AGENCY

**ALBEMARLE COUNTY, VA**
(UNINCORPORATED AREAS)

**FLOOD INSURANCE ZONE DATA**

**NORTH FORK RIVANNA RIVER, MECHUMS RIVER, SOUTH FORK RIVANNA RIVER, AND IVY CREEK**

| FLOODING SOURCE | PANEL[1] | ELEVATION DIFFERENCE[2] BETWEEN 1.0% (100-YEAR) FLOOD AND | | | FHF | ZONE | BASE FLOOD ELEVATION[3] (NGVD) |
|---|---|---|---|---|---|---|---|
| | | 10% (10 YR.) | 2% (50 YR.) | 0.2% (500 YR.) | | | |
| Little Ivy Creek | | | | | | | |
| Reach 1 | 205,215 | -0.9 | -0.2 | +0.8 | 010 | A2 | Varies |
| Reach 2 | 205,215 | -2.1 | -0.5 | +1.4 | 020 | A4 | Varies |
| Reach 3 | 215 | -6.7 | -3.8 | +13.5 | 065 | A13 | Varies |
| Reach 4 | 215 | -1.9 | -0.8 | +6.9 | 020 | A4 | Varies |
| Jumping Branch | | | | | | | |
| Reach 1 | 210 | -2.3 | -0.7 | +1.7 | 025 | A5 | Varies |
| Reach 2 | 210 | -1.5 | -0.4 | +1.0 | 015 | A3 | Varies |
| Powell Creek | | | | | | | |
| Reach 1 | 230,235 | -1.7 | -0.5 | +1.2 | 015 | A3 | Varies |
| Reach 2 | 230 | -4.4 | -2.3 | +4.9 | 045 | A9 | Varies |
| Reach 3 | 230 | -1.4 | -0.4 | +1.8 | 015 | A3 | Varies |
| Rivanna River | | | | | | | |
| Reach 1 | 240,245 | -9.2 | -3.1 | +8.1 | 090 | A18 | Varies |
| Reach 2 | 240 | -9.7 | -3.5 | +8.0 | 095 | A19 | Varies |
| Reach 3 | 230,240 | -10.5 | -3.6 | +7.7 | 110 | A21 | Varies |

[1]Flood Insurance Rate Map Panel
[2]Weighted average
[3]Rounded to the nearest foot - see map

TABLE 3

FEDERAL EMERGENCY MANAGEMENT AGENCY

**ALBEMARLE COUNTY, VA**
(UNINCORPORATED AREAS)

## FLOOD INSURANCE ZONE DATA

LITTLE IVY CREEK, JUMPING BRANCH, POWELL CREEK, AND RIVANNA RIVER

| FLOODING SOURCE | PANEL[1] | ELEVATION DIFFERENCE[2] BETWEEN 1.0% (100-YEAR) FLOOD AND | | | FHF | ZONE | BASE FLOOD ELEVATION[3] (NGVD) |
|---|---|---|---|---|---|---|---|
| | | 10% (10 YR.) | 2% (50 YR.) | 0.2% (500 YR.) | | | |
| **Meadow Creek** | | | | | | | |
| Reach 1 | 240 | -3.6 | -1.3 | +2.0 | 035 | A7 | Varies |
| Reach 2 | 240 | -4.3 | -2.1 | +2.9 | 045 | A9 | Varies |
| Reach 3 | 240 | -2.5 | -1.0 | +1.5 | 025 | A5 | Varies |
| Reach 4 | 230 | -2.2 | -1.0 | +1.8 | 020 | A4 | Varies |
| **Moores Creek** | | | | | | | |
| Reach 1 | 220,240 | -4.9 | -1.6 | +4.1 | 050 | A10 | Varies |
| Reach 2 | 215,220 | -3.7 | -1.1 | +2.9 | 035 | A7 | Varies |
| **Biscuit Run** | | | | | | | |
| Reach 1 | 220 | -4.2 | -2.0 | +3.7 | 040 | A8 | Varies |
| Reach 2 | 220,335 | -2.1 | -0.7 | +1.9 | 020 | A4 | Varies |
| **James River** | | | | | | | |
| Reach 1 | 300,450 475 | -7.4 | -2.4 | +5.5 | 075 | A15 | Varies |

[1]Flood Insurance Rate Map Panel
[2]Weighted Average
[3]Rounded to the nearest foot - see map

TABLE 3

FEDERAL EMERGENCY MANAGEMENT AGENCY

**ALBEMARLE COUNTY, VA**
**(UNINCORPORATED AREAS)**

**FLOOD INSURANCE ZONE DATA**

**MEADOW CREEK - MOORES CREEK - BISCUIT RUN - JAMES RIVER**

## 5.3 Flood Insurance Zones

Flood insurance zones and zone numbers are assigned based on the type of flood hazard and the FHF, respectively. A unique zone number is associated with each possible FHF, and varies from 1 for a FHF of 005 to a maximum of 30 for a FHF of 200 or greater.

| | |
|---|---|
| Zone A: | Special Flood Hazard Areas inundated by the 100-year flood, determined by approximate methods; no base flood elevations shown or FHFs determined. |
| Zone A2, A3, A4 A7, A8, A9, A10, A12, A13, A14, A15, A18, A19, A20, A21: | Special Flood Hazard Areas inundated by the 100-year flood; with base flood elevations shown, and zones subdivided according to FHFs. |
| Zone B: | Areas between the Special Flood Hazard Areas and the limits of the 500-year flood; areas that are protected from the 100- or 500-year floods by dike, levee, or other water control structure; areas subject to certain types of 100-year shallow flooding where depths are less than 1.0 foot; and areas subject to 100-year flooding from sources with drainage areas less than 1 square mile. Zone B is not subdivided. |
| Zone C: | Areas of minimal flooding; not subdivided. |

Flood elevation differences, FHFs, flood insurance zones, and base flood elevations for the flooding sources studied in detail in the community are shown in Table 3.

## 5.4 Flood Insurance Rate Map Description

The Flood Insurance Rate Map for the unincorporated areas of Albemarle County is, for insurance purposes, the principal result of the Flood Insurance Study. This map contains the official delineation of flood insurance zones and base flood elevations. Base flood elevation lines show the locations of the expected whole-foot water-surface elevation of the base (100-year) flood. The base flood elevations and zone numbers are used by insurance agents, in conjunction with structure elevations and characteristics, to assign actuarial insurance rates to structures and contents insured under the National Flood Insurance Program.

# 6.0 OTHER STUDIES

The COE has prepared Flood Plain Information reports on a number of streams in Albemarle County (References 5, 6, 7, 8, 9, 10, 11, and 12). Discharge data from these reports were used in the present study.

Flood Insurance Studies have been prepared for the City of Charlottesville and the Town of Scottsville, both within Albemarle County (References 13 and 14). Studies have also been prepared for the unincorporated areas of Nelson County, the unincorporated areas of Buckingham County, and the unincorporated areas of Fluvanna County, which border Albemarle County (References 15, 3, and 16). As a result of the present study, the Moores Creek discharges presented in the Charlottesville study have been revised. Data for, and results of, all these studies have been coordinated to agree across municipal-county borders.

Due to its more up-to-date nature, this study supersedes the previously published Flood Insurance Study for the unincorporated areas of Albemarle County (Reference 20).

## 7.0 LOCATION OF DATA

Information concerning the pertinent data used in preparation of this study can be obtained by contacting FEMA, the Natural and Technological Hazards Division, Liberty Square Building (Second Floor), 105 South Seventh Street, Philadelphia, Pennsylvania 19106.

## 8.0 BIBLIOGRAPHY AND REFERENCES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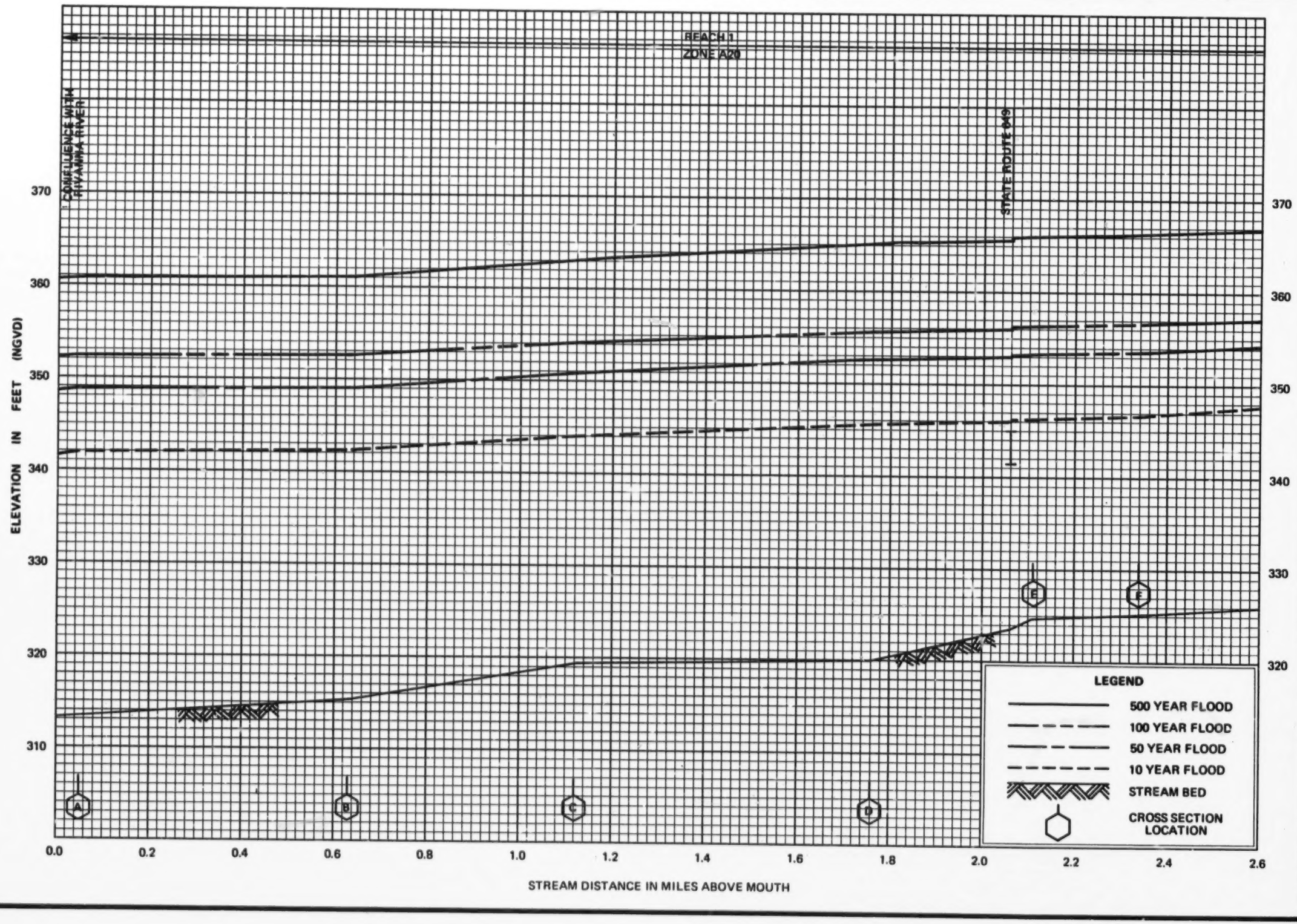


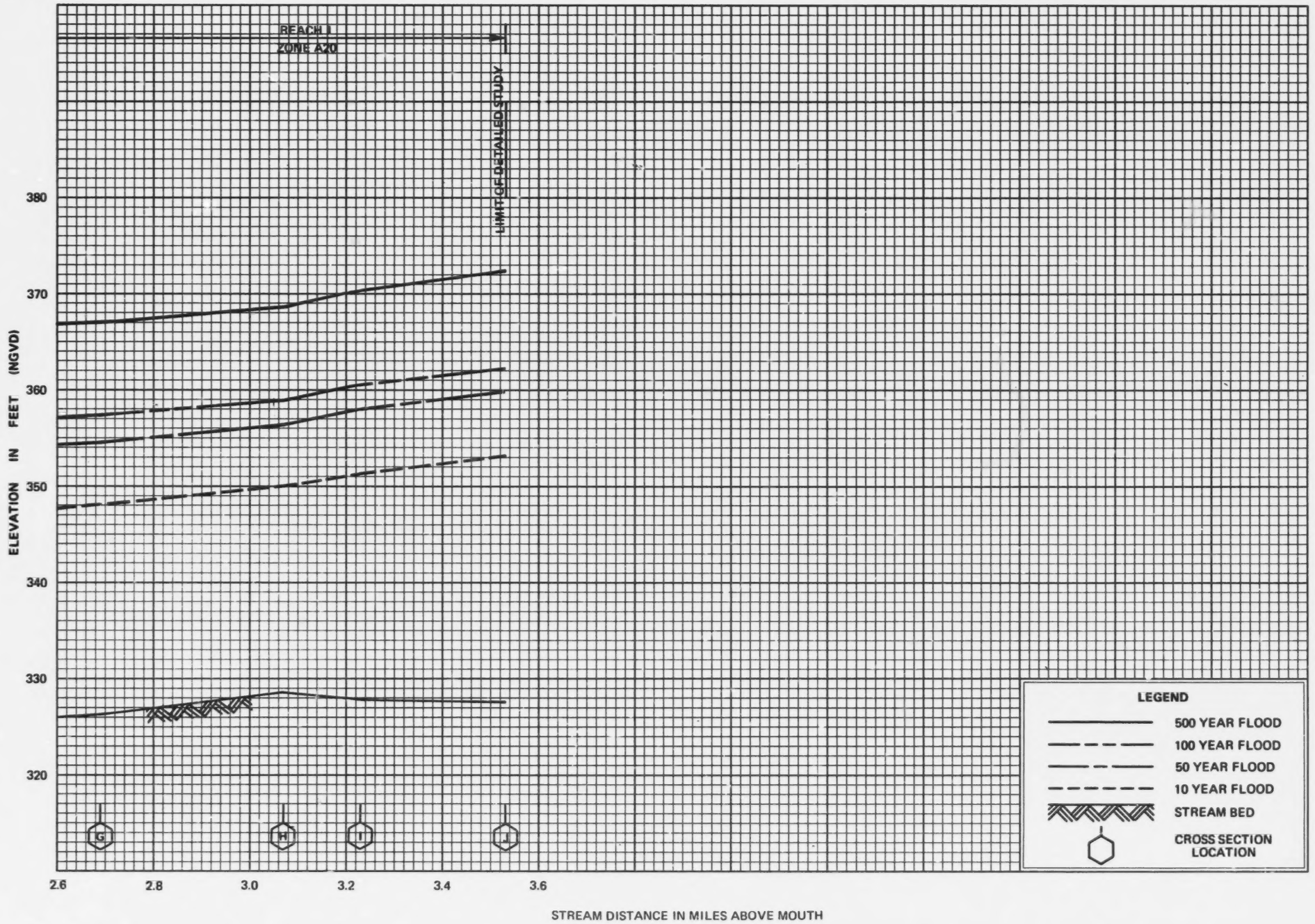

FLOOD PROFILES

NORTH FORK RIVANNA RIVER

FEDERAL EMERGENCY MANAGEMENT AGENCY

ALBEMARLE COUNTY, VA
(UNINCORPORATED AREAS)

01P



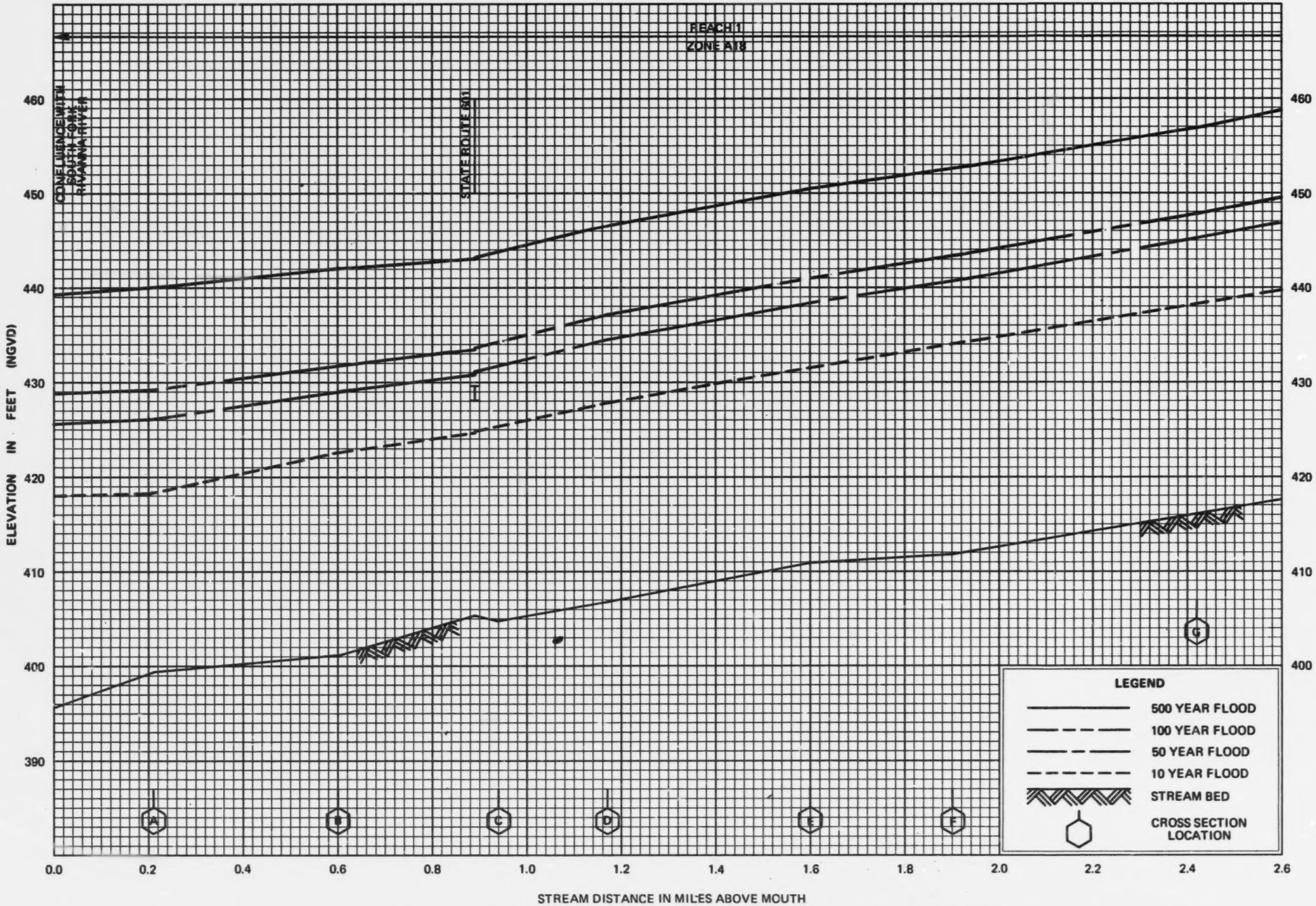

FLOOD PROFILES

NORTH FORK RIVANNA RIVER

FEDERAL EMERGENCY MANAGEMENT AGENCY

ALBEMARLE COUNTY, VA
(UNINCORPORATED AREAS)

02P




FLOOD PROFILES

MECHUMS RIVER

FEDERAL EMERGENCY MANAGEMENT AGENCY

ALBEMARLE COUNTY, VA
(UNINCORPORATED AREAS)

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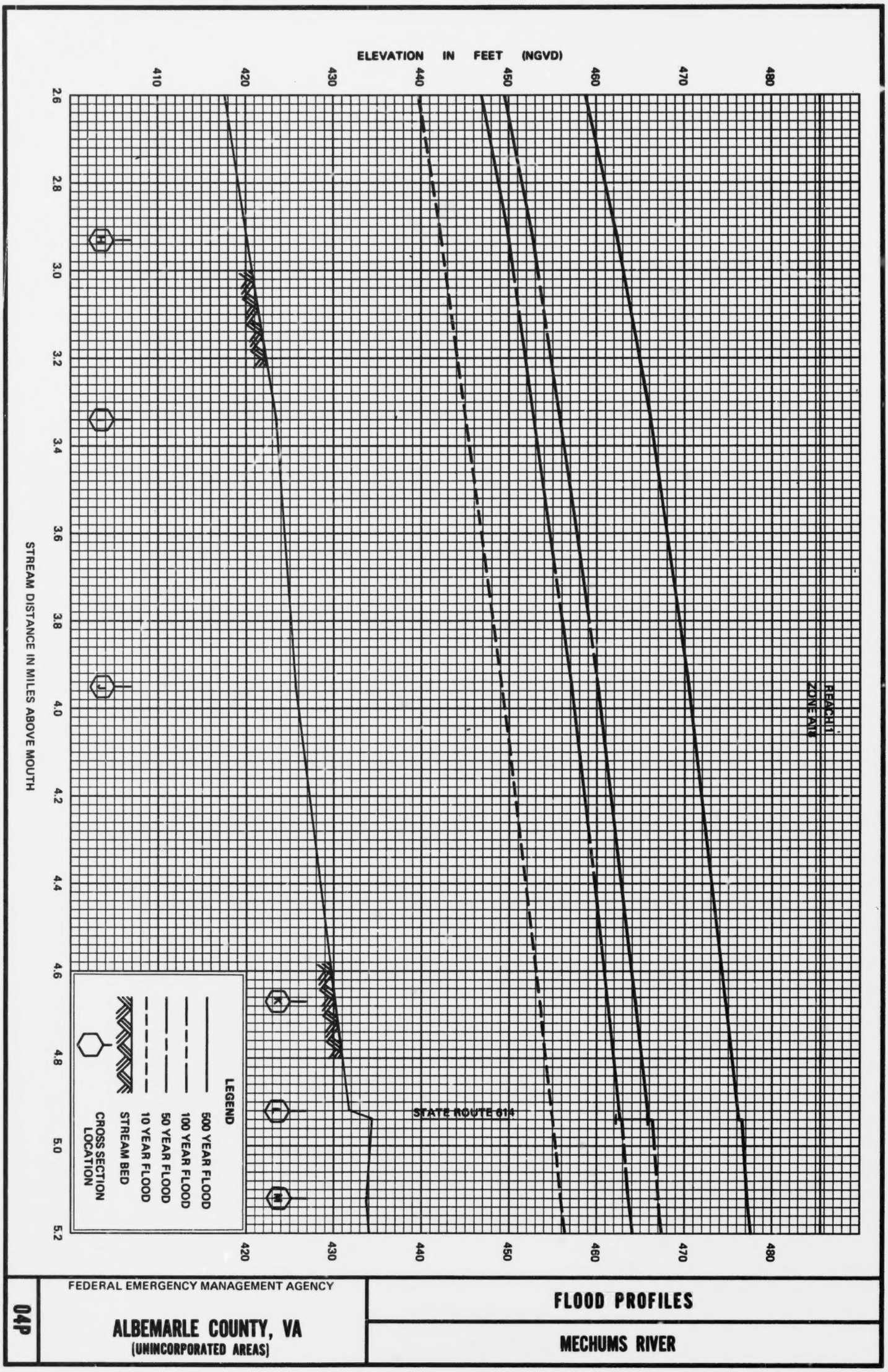


FEDERAL EMERGENCY MANAGEMENT AGENCY

**ALBEMARLE COUNTY, VA**
(UNINCORPORATED AREAS)

**FLOOD PROFILES**

**MECHUMS RIVER**

04P

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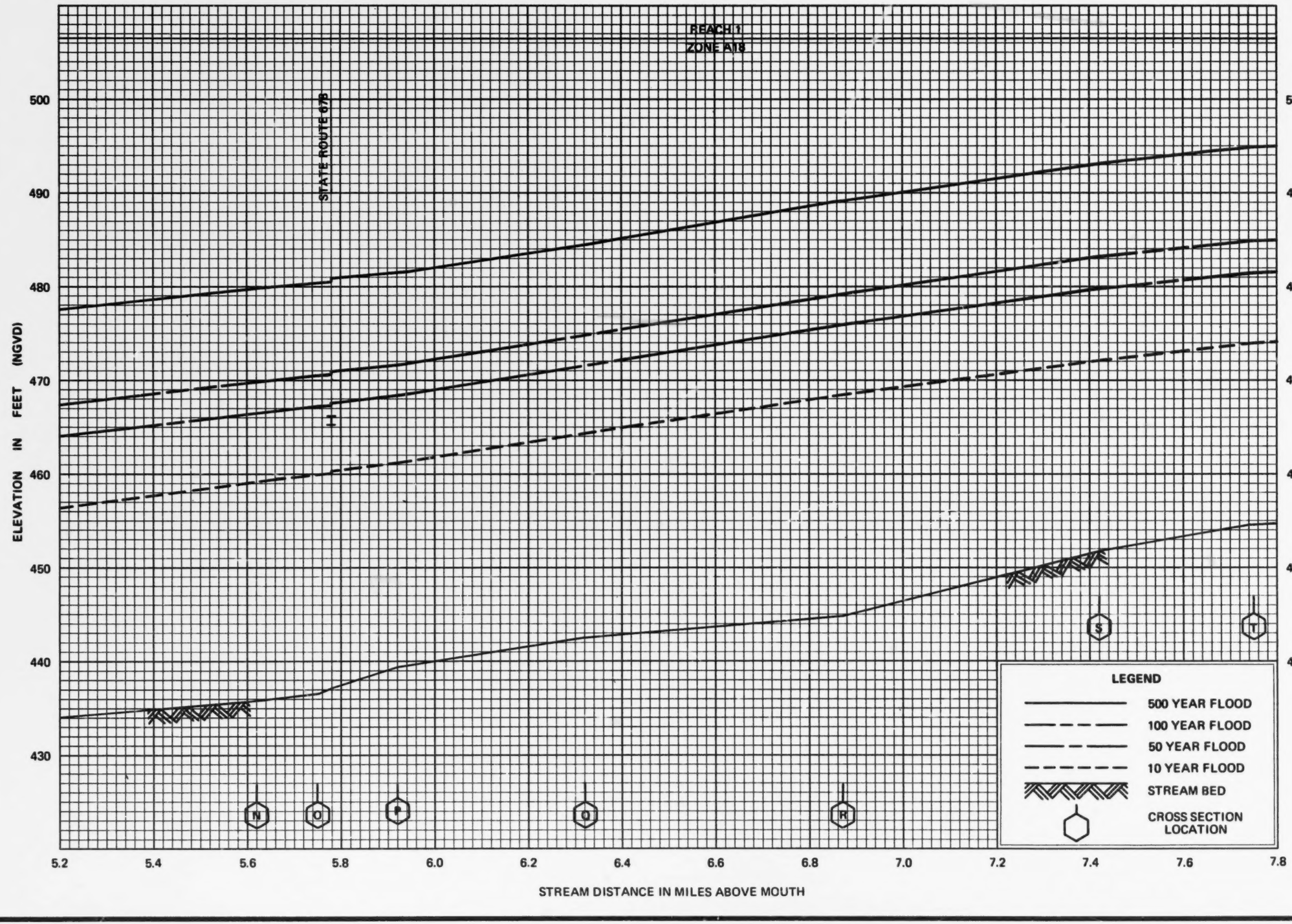


FLOOD PROFILES

MECHUMS RIVER

FEDERAL EMERGENCY MANAGEMENT AGENCY

ALBEMARLE COUNTY, VA
(UNINCORPORATED AREAS)

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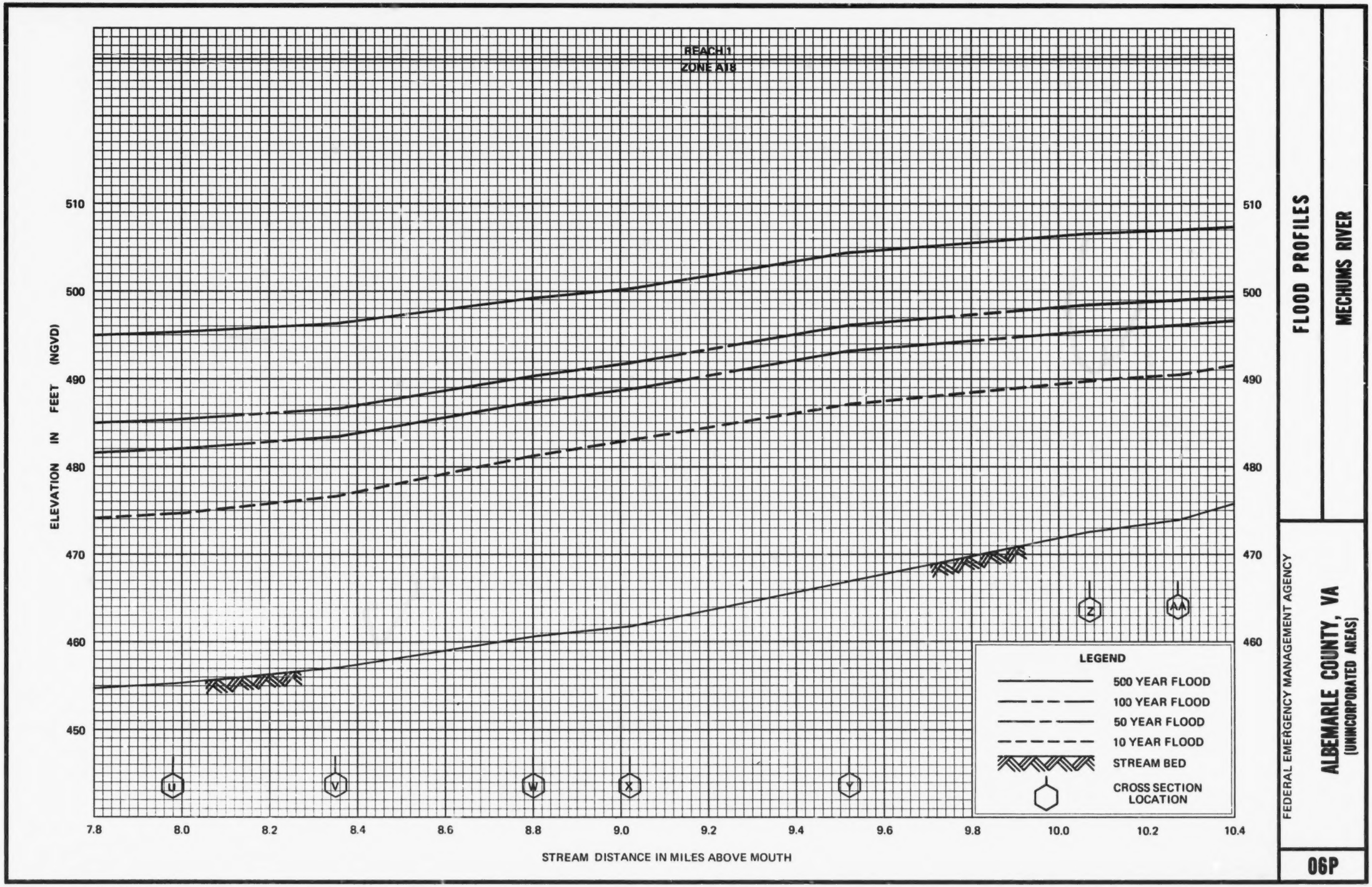


FLOOD PROFILES

MECHUMS RIVER

FEDERAL EMERGENCY MANAGEMENT AGENCY

ALBEMARLE COUNTY, VA
(UNINCORPORATED AREAS)

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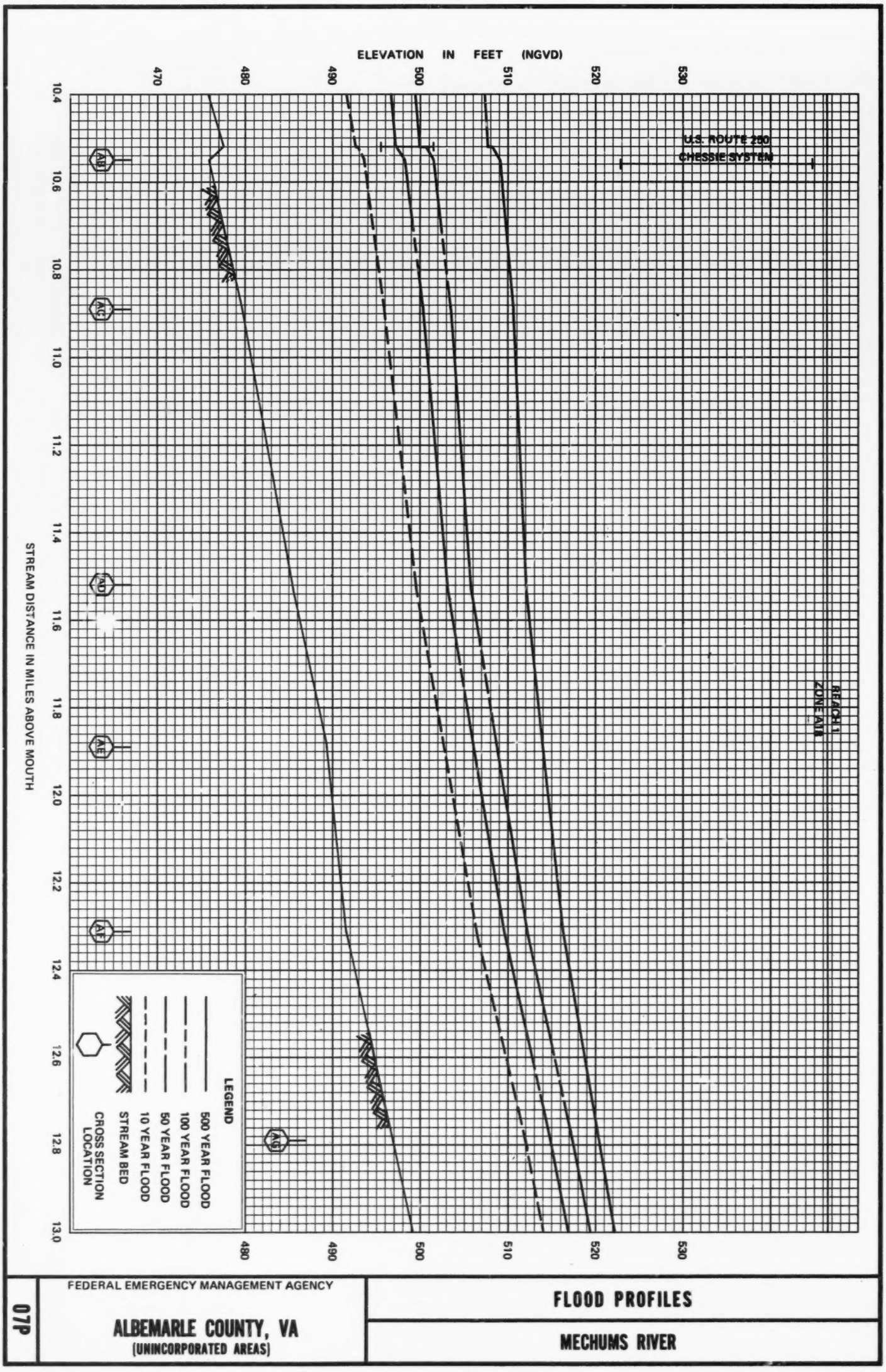


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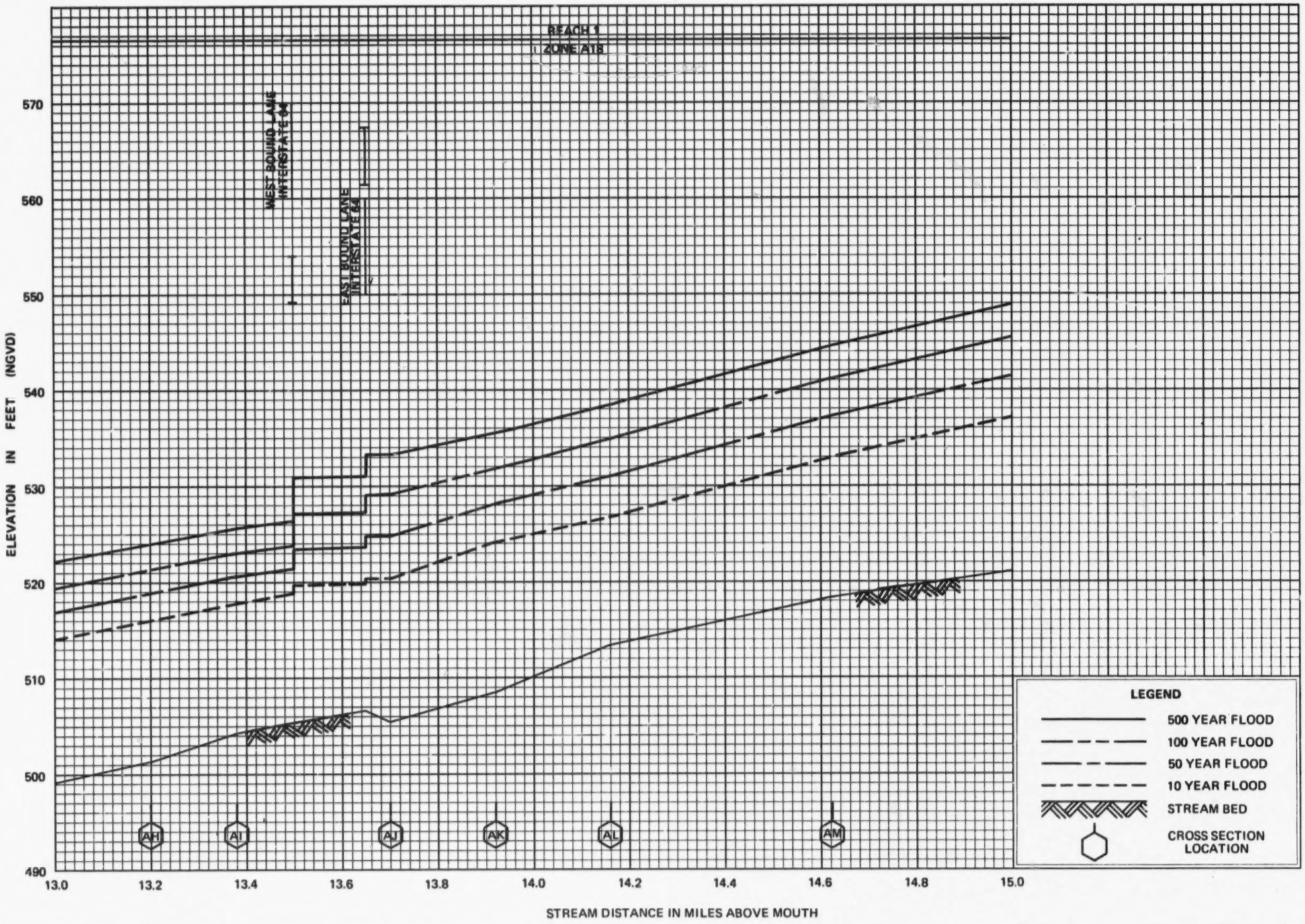
FEDERAL EMERGENCY MANAGEMENT AGENCY

**ALBEMARLE COUNTY, VA**
(UNINCORPORATED AREAS)

**FLOOD PROFILES**

**MECHUMS RIVER**




FLOOD PROFILES

MECHUMS RIVER

FEDERAL EMERGENCY MANAGEMENT AGENCY

ALBEMARLE COUNTY, VA
(UNINCORPORATED AREAS)

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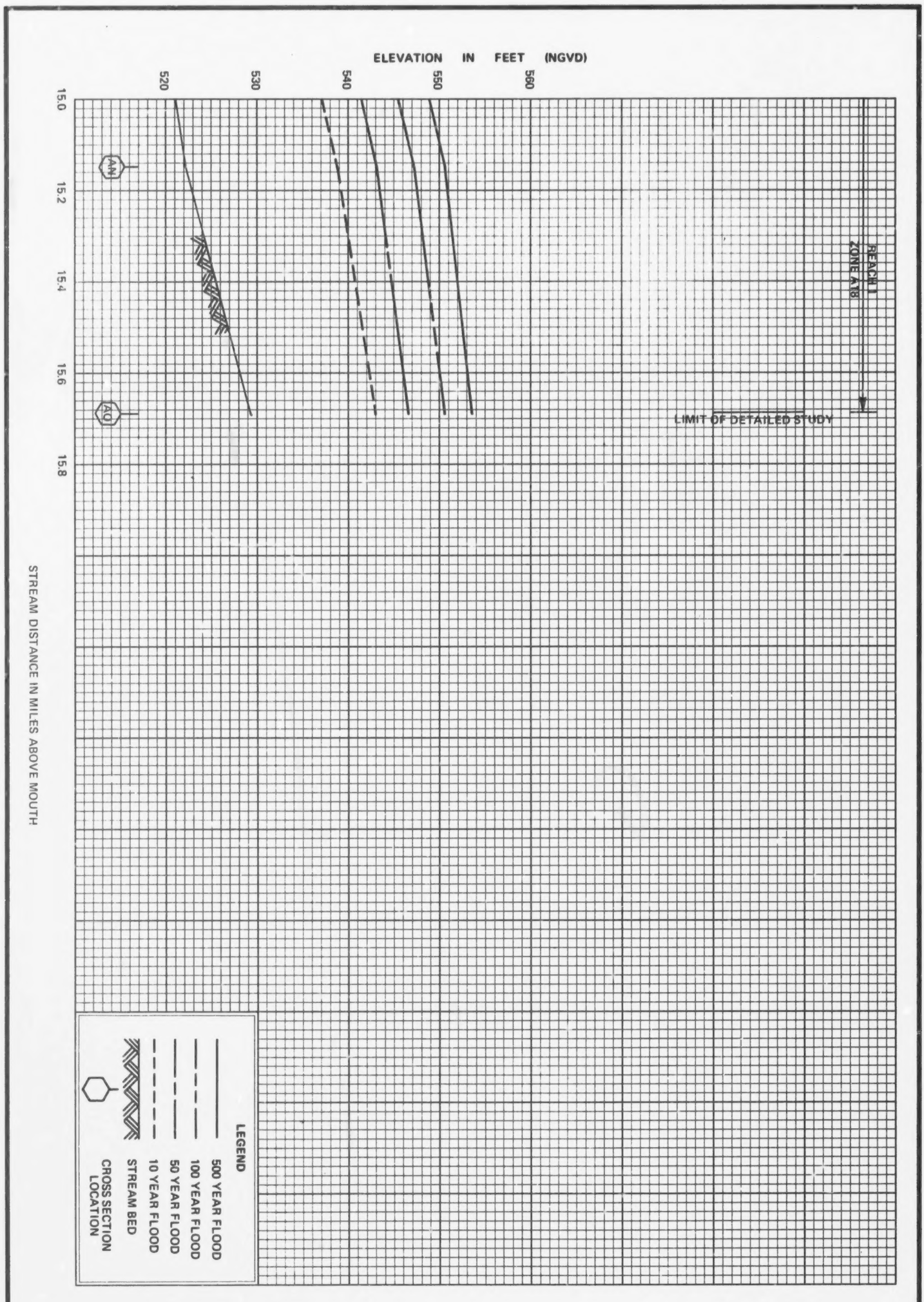


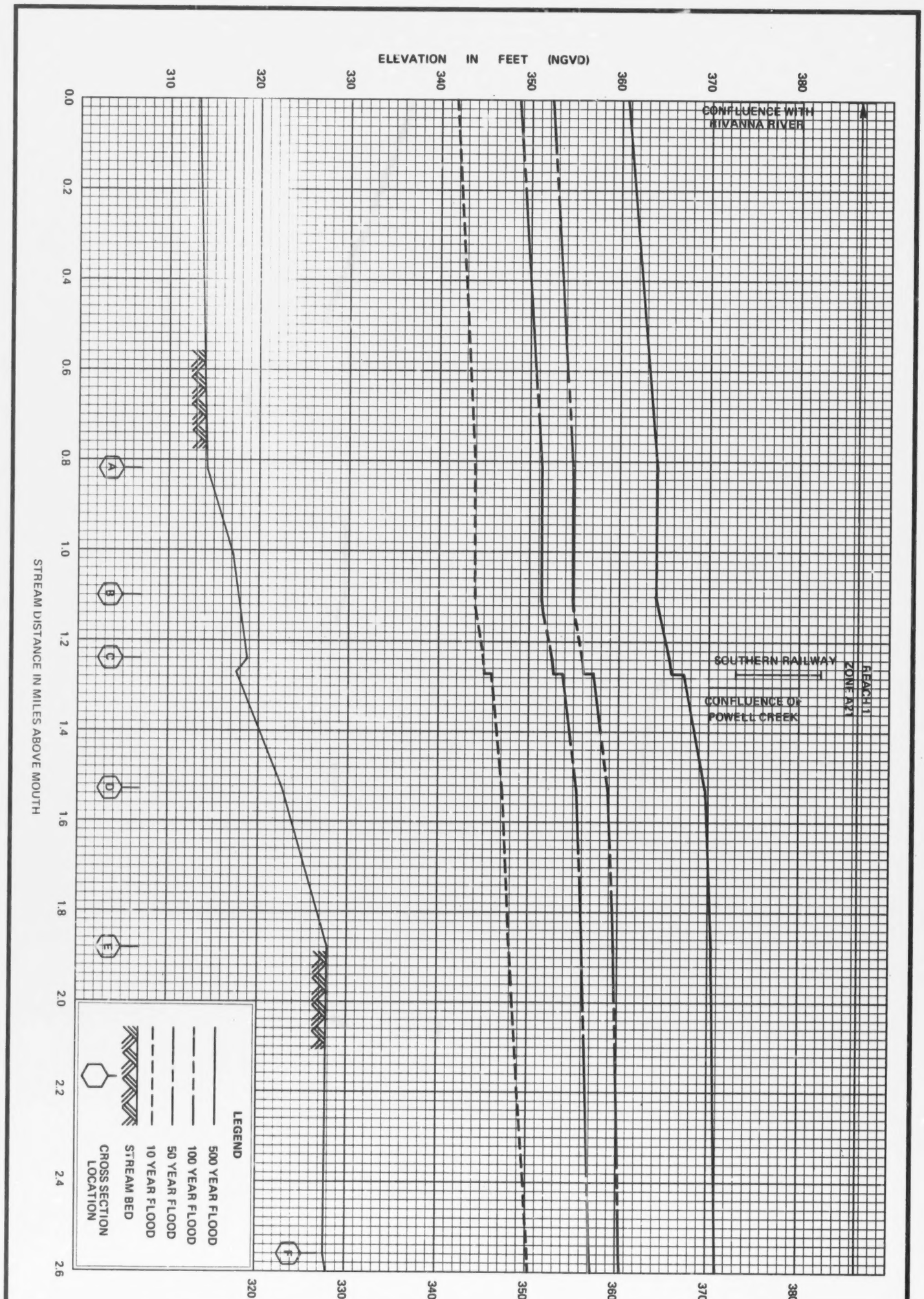

FEDERAL EMERGENCY MANAGEMENT AGENCY

**ALBEMARLE COUNTY, VA**
**(UNINCORPORATED AREAS)**

**FLOOD PROFILES**

**MECHUMS RIVER**

09P



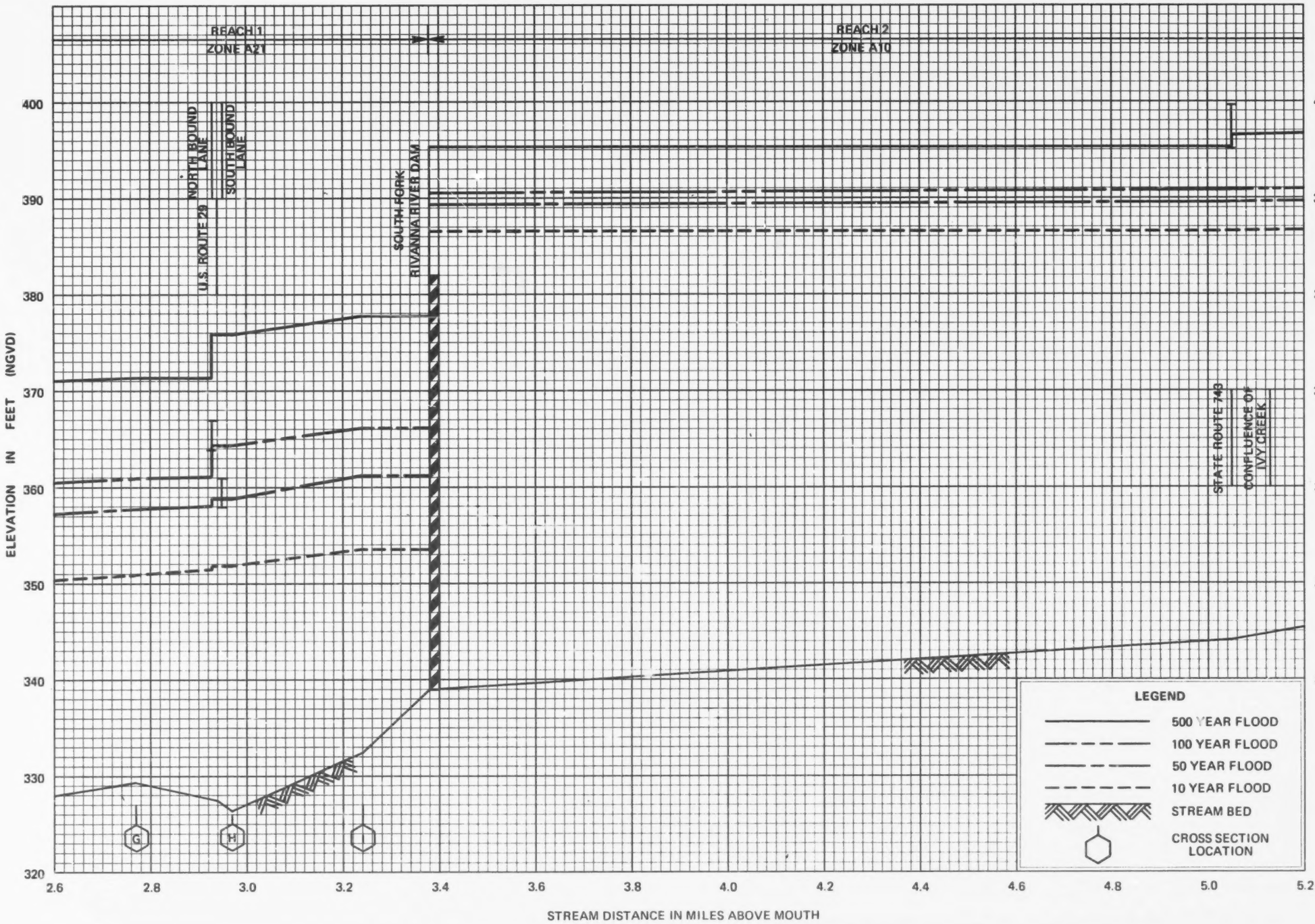

FEDERAL EMERGENCY MANAGEMENT AGENCY

**ALBEMARLE COUNTY, VA**
**(UNINCORPORATED AREAS)**

**FLOOD PROFILES**

**SOUTH FORK RIVANNA RIVER**

**10P**



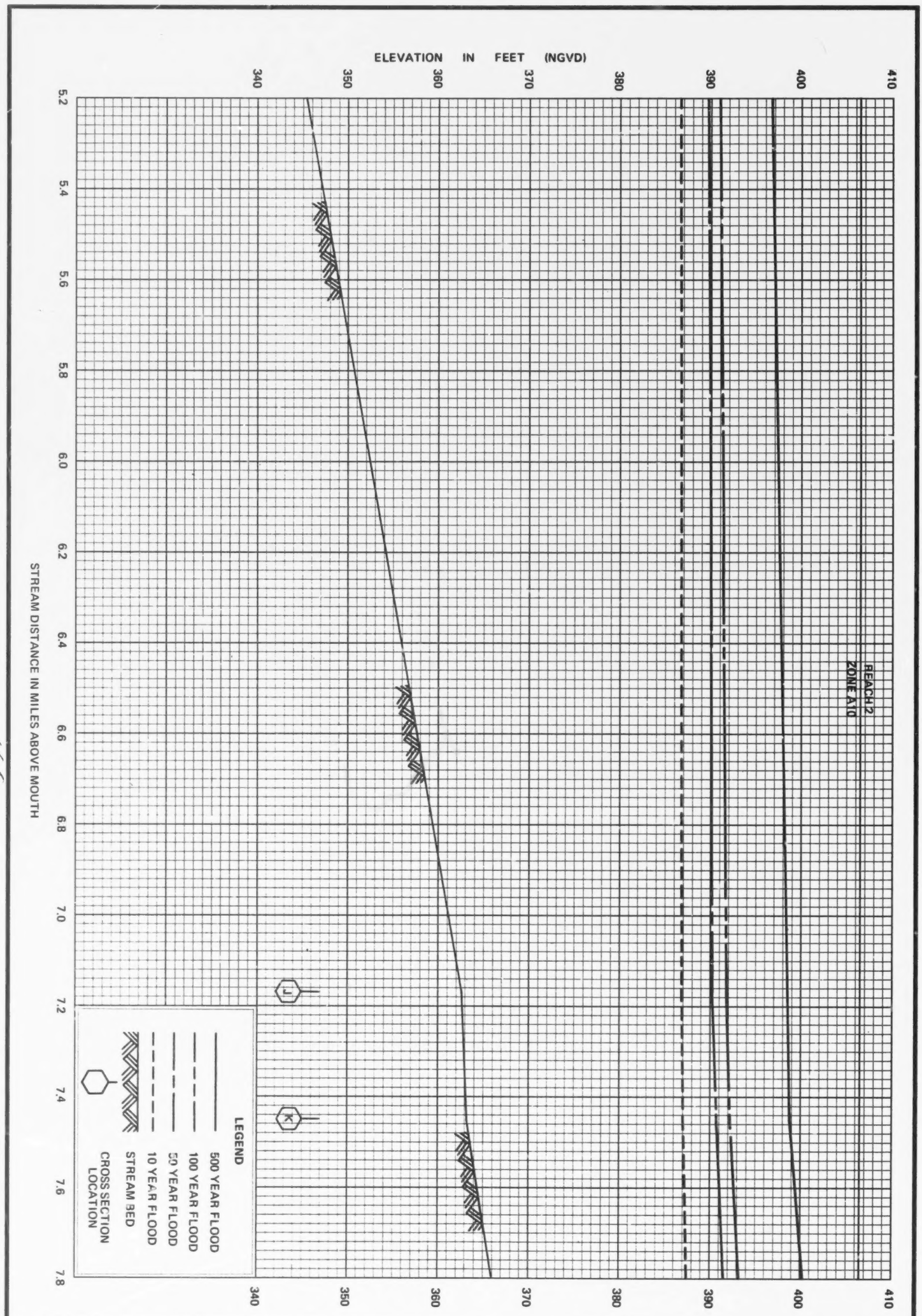

FLOOD PROFILES

SOUTH FORK RIVANNA RIVER

FEDERAL EMERGENCY MANAGEMENT AGENCY

ALBEMARLE COUNTY, VA
(UNINCORPORATED AREAS)

11P



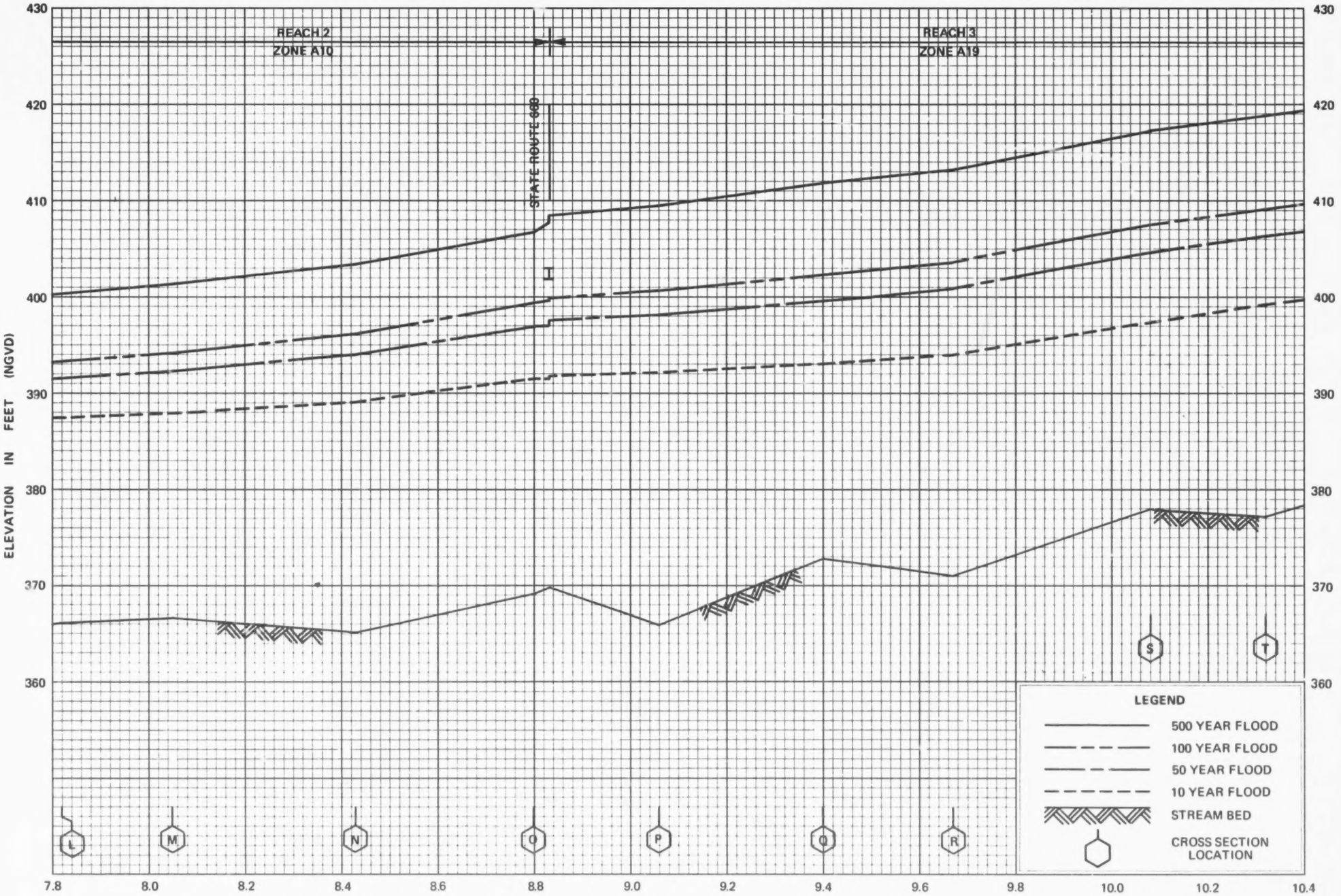

FEDERAL EMERGENCY MANAGEMENT AGENCY

**ALBEMARLE COUNTY, VA**
**(UNINCORPORATED AREAS)**

**FLOOD PROFILES**

**SOUTH FORK RIVANNA RIVER**

**12P**



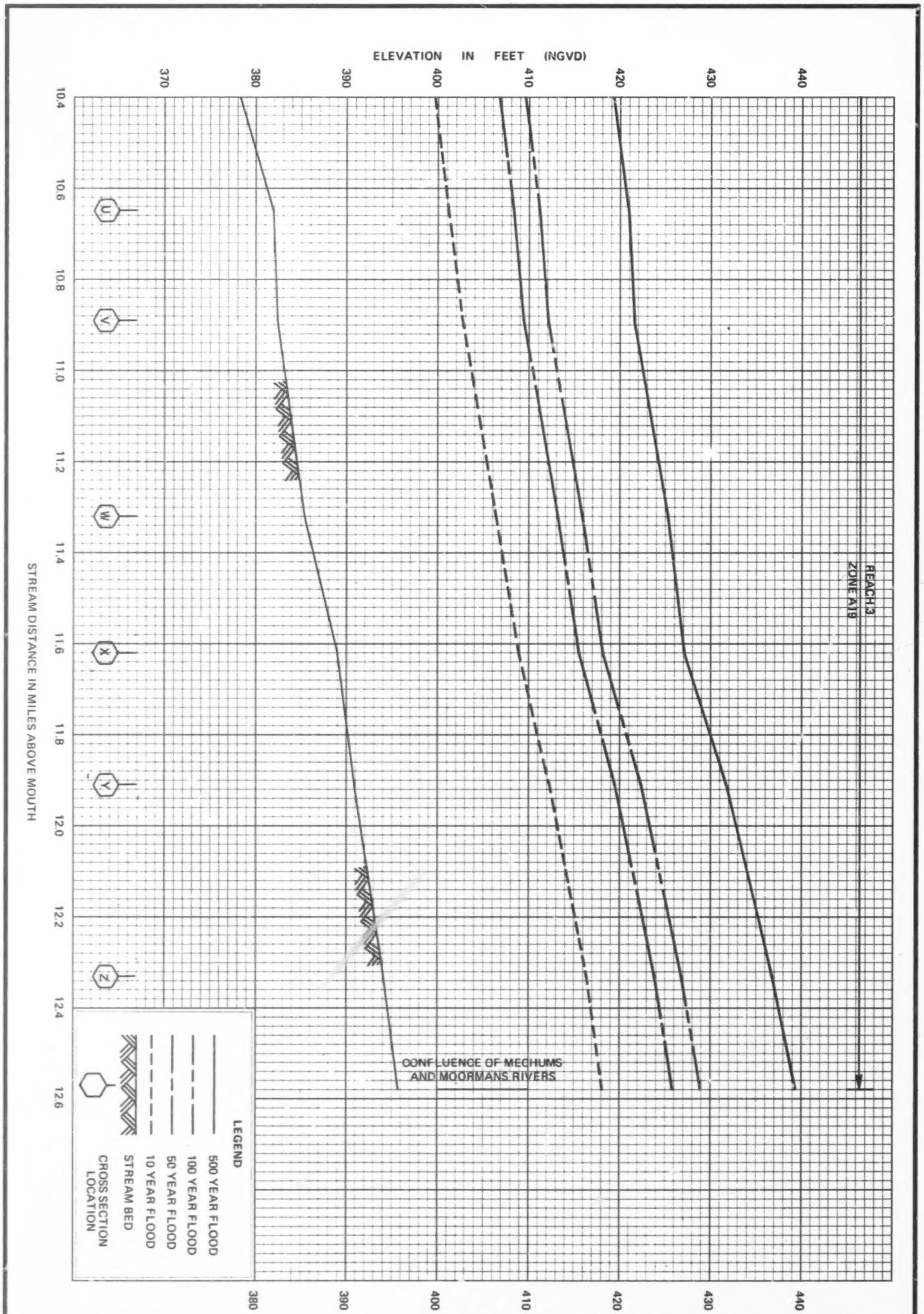

FLOOD PROFILES

SOUTH FORK RIVANNA RIVER

FEDERAL EMERGENCY MANAGEMENT AGENCY

ALBEMARLE COUNTY, VA
(UNINCORPORATED AREAS)

13P



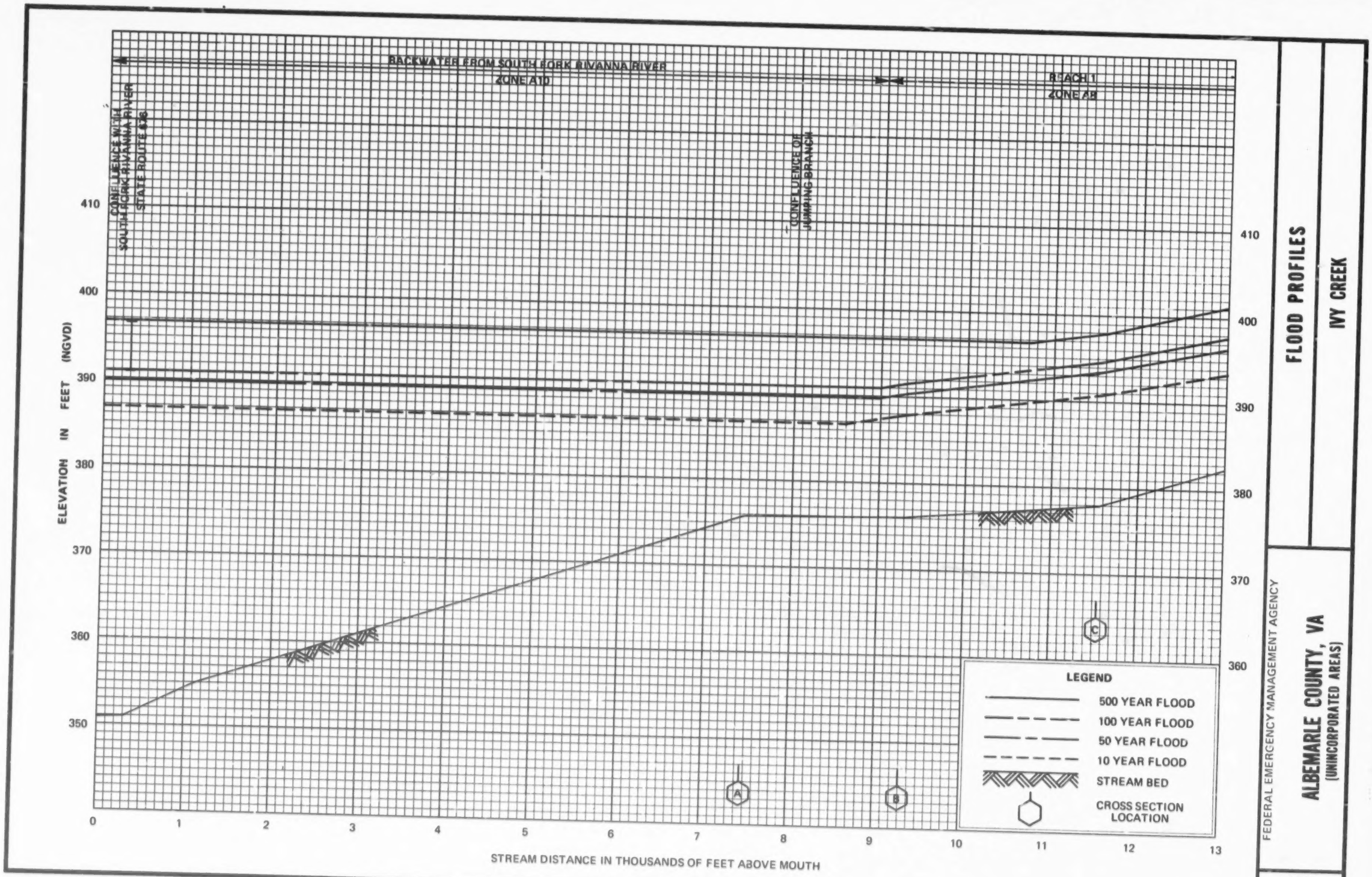

FEDERAL EMERGENCY MANAGEMENT AGENCY

**ALBEMARLE COUNTY, VA**
(UNINCORPORATED AREAS)

**FLOOD PROFILES**

**SOUTH FORK RIVANNA RIVER**

14P



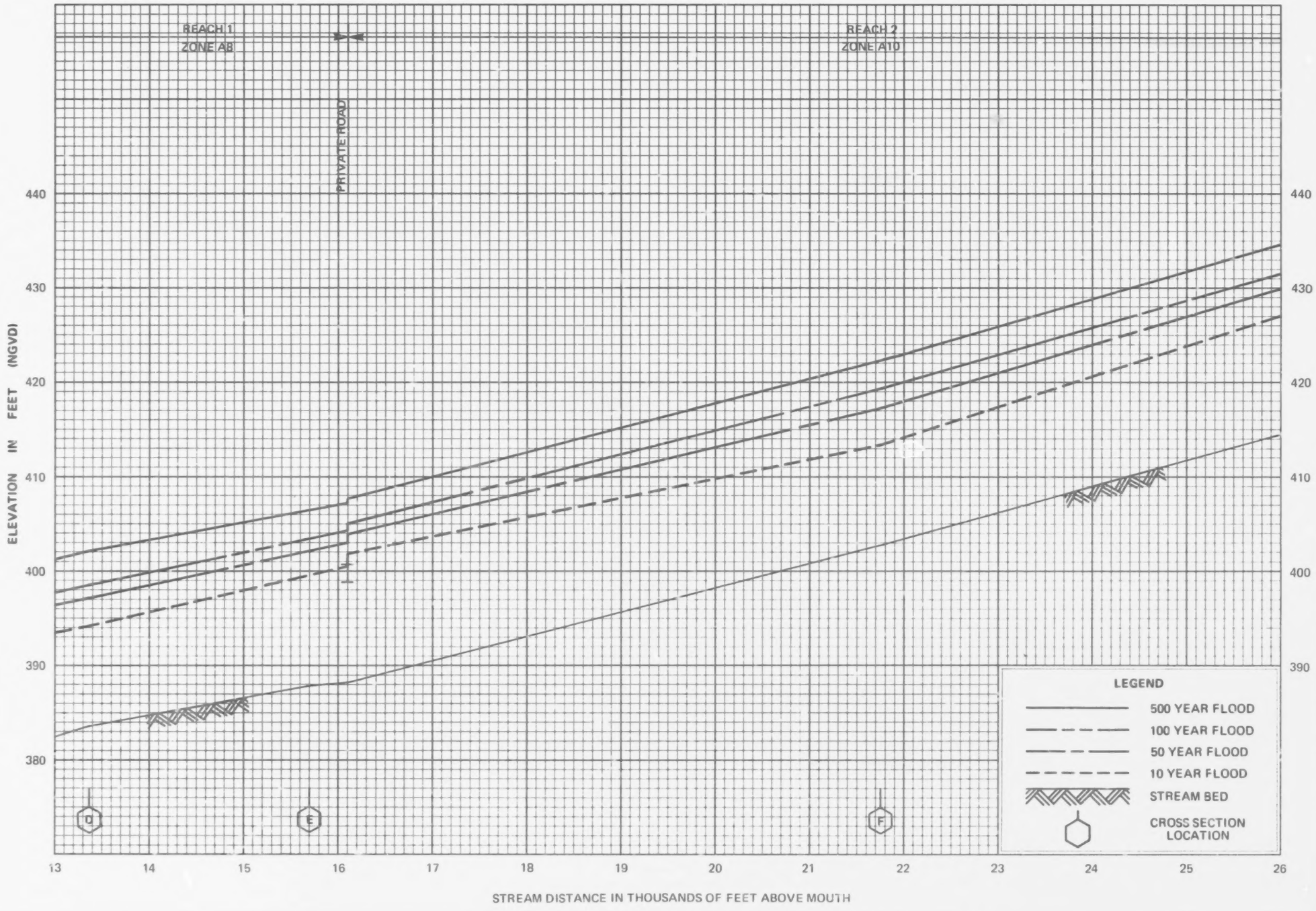

FLOOD PROFILES

IVY CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY

ALBEMARLE COUNTY, VA
(UNINCORPORATED AREAS)

15P



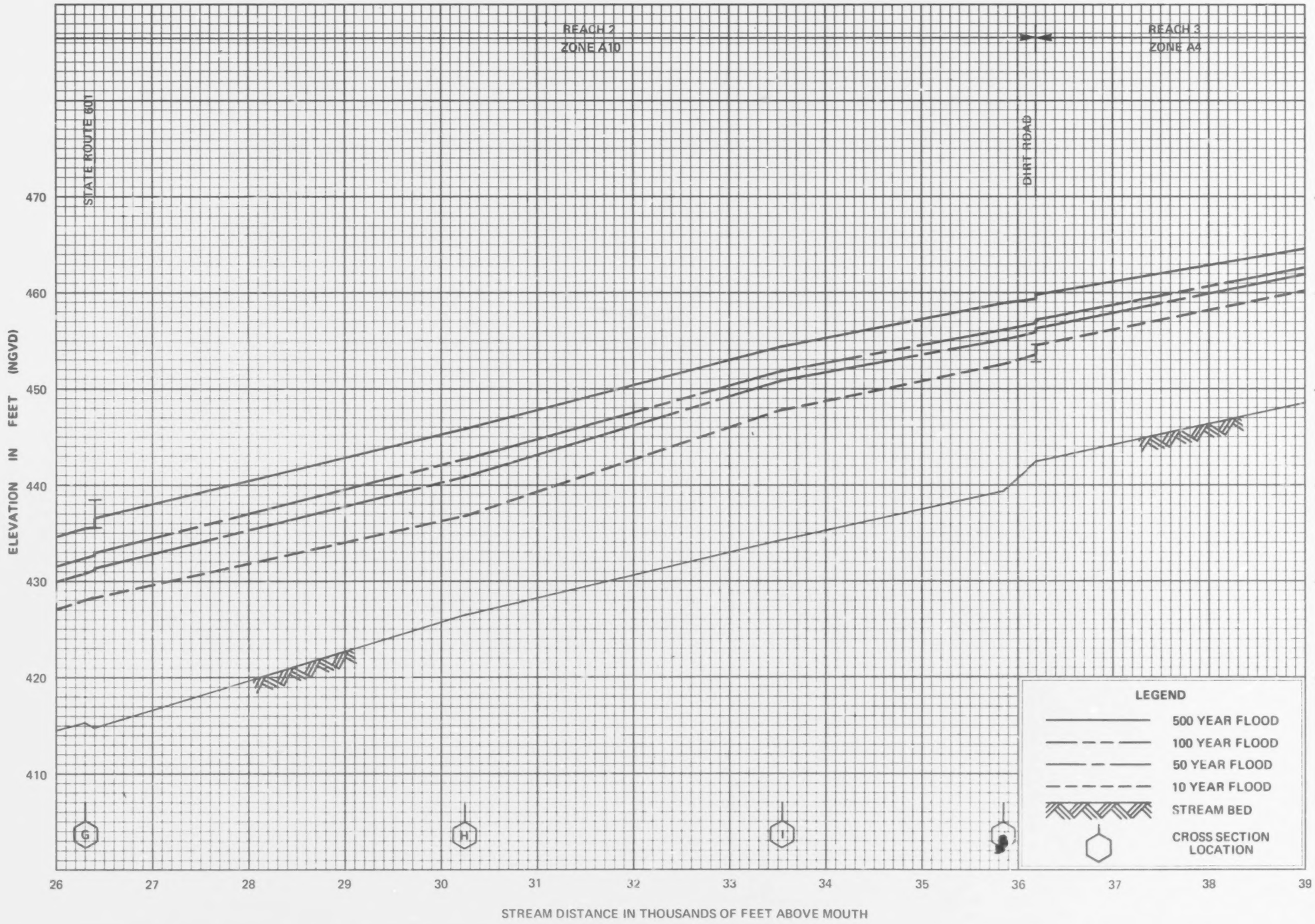

FLOOD PROFILES

IVY CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY

ALBEMARLE COUNTY, VA
(UNINCORPORATED AREAS)

16P




# FLOOD PROFILES

## IVY CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY

**ALBEMARLE COUNTY, VA**
(UNINCORPORATED AREAS)

17P

REACH 3
ZONE A4

REACH 4
ZONE A14

REACH 5
ZONE A7

REACH 6
ZONE A4

STATE ROUTE 677

CONFLUENCE OF LITTLE IVY CREEK

CHESSIE SYSTEM

OLD STATE ROUTE 250 (ABANDONED BRIDGE)
U.S. ROUTE 250

STATE ROUTE 637

ELEVATION IN FEET (NGVD)

520
510
500
490
480
470
460
450
440

39 40 41 42 43 44 45 46 47 48 49 50 51 52

STREAM DISTANCE IN THOUSANDS OF FEET ABOVE MOUTH

K L M N

LEGEND

500 YEAR FLOOD
100 YEAR FLOOD
50 YEAR FLOOD
10 YEAR FLOOD
STREAM BED
CROSS SECTION LOCATION

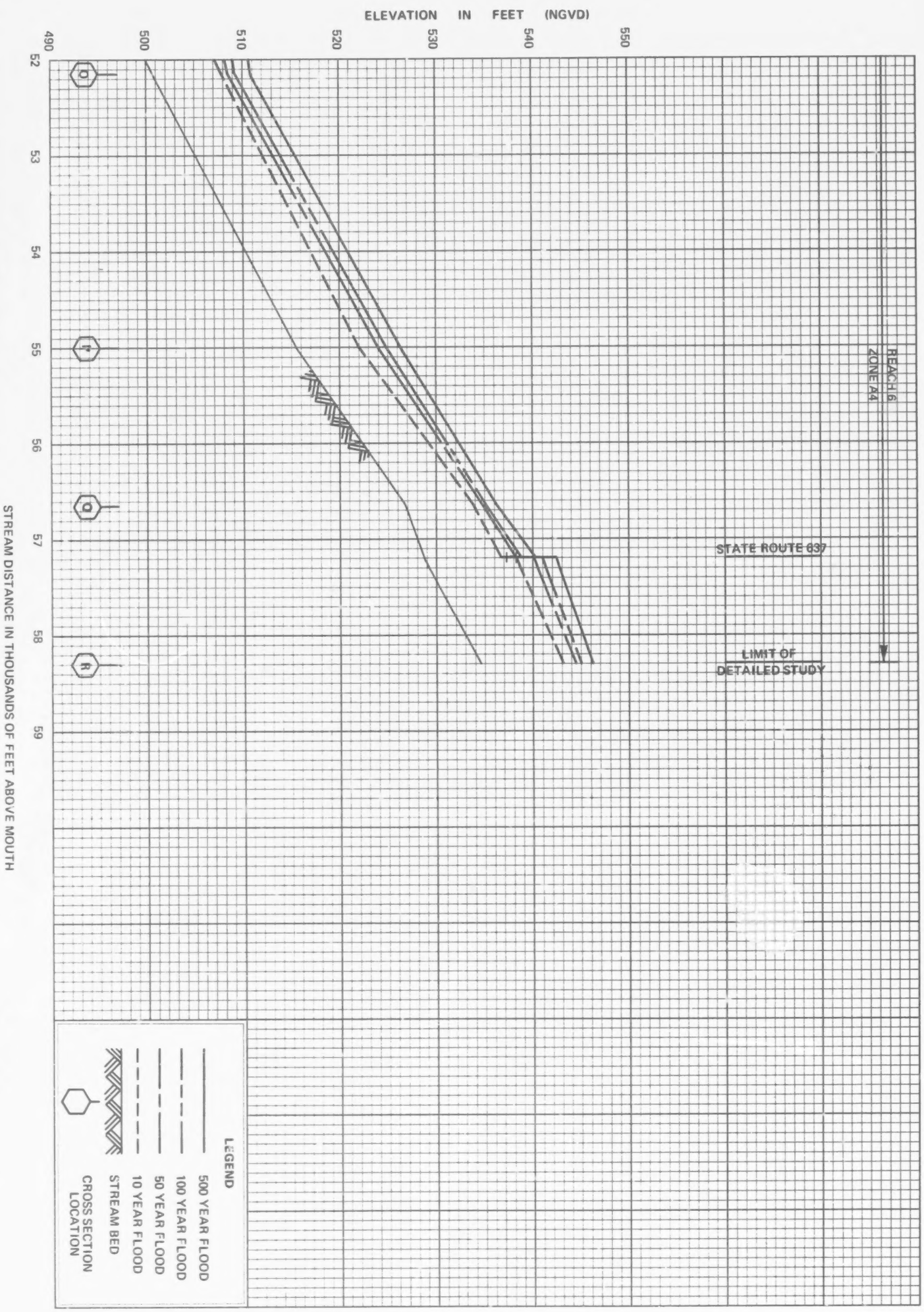
# FLOOD PROFILES

## IVY CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY

## ALBEMARLE COUNTY, VA
(UNINCORPORATED AREAS)

18P




57

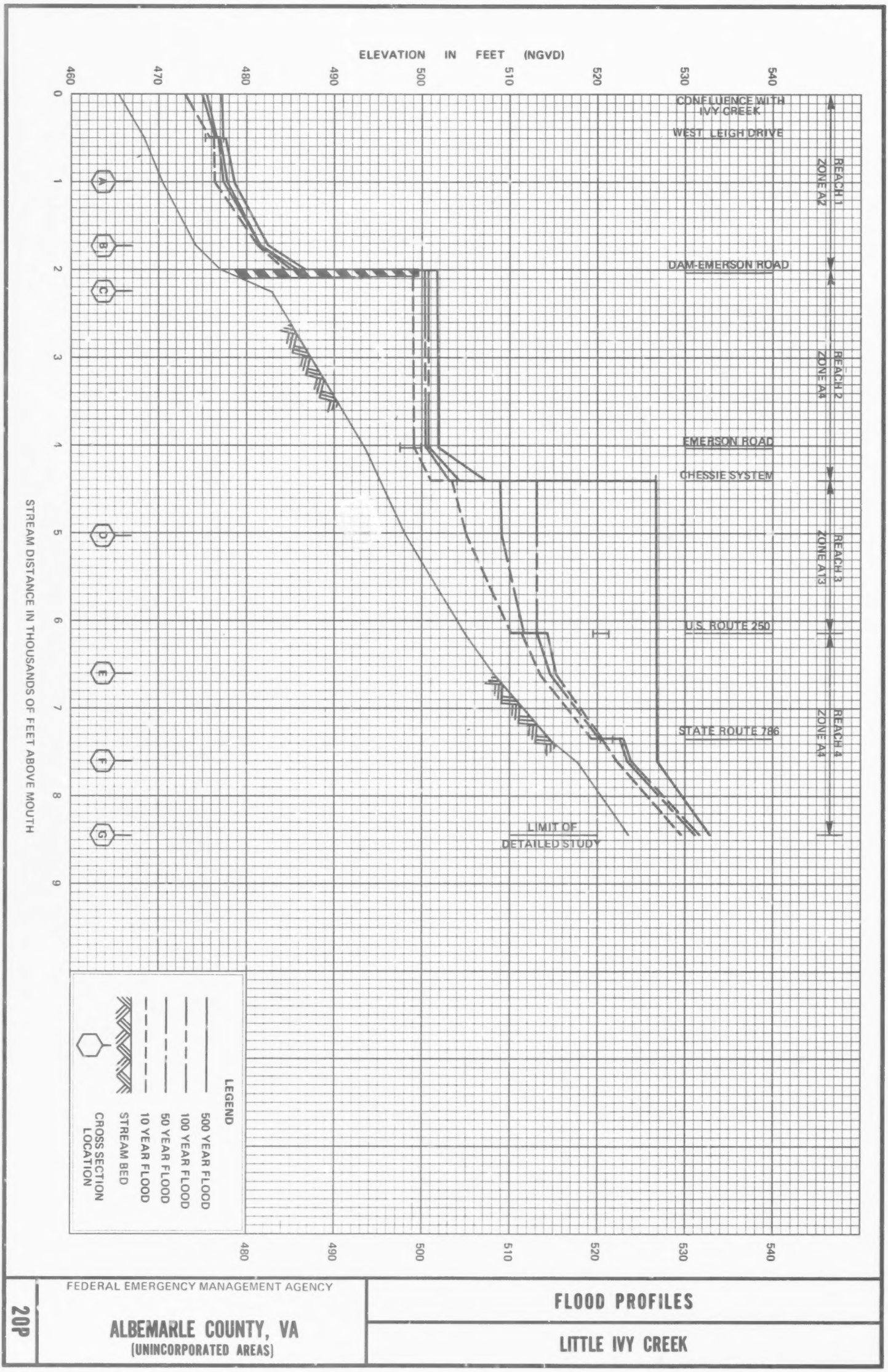


FEDERAL EMERGENCY MANAGEMENT AGENCY

**ALBEMARLE COUNTY, VA**
(UNINCORPORATED AREAS)

**FLOOD PROFILES**

**IVY CREEK**



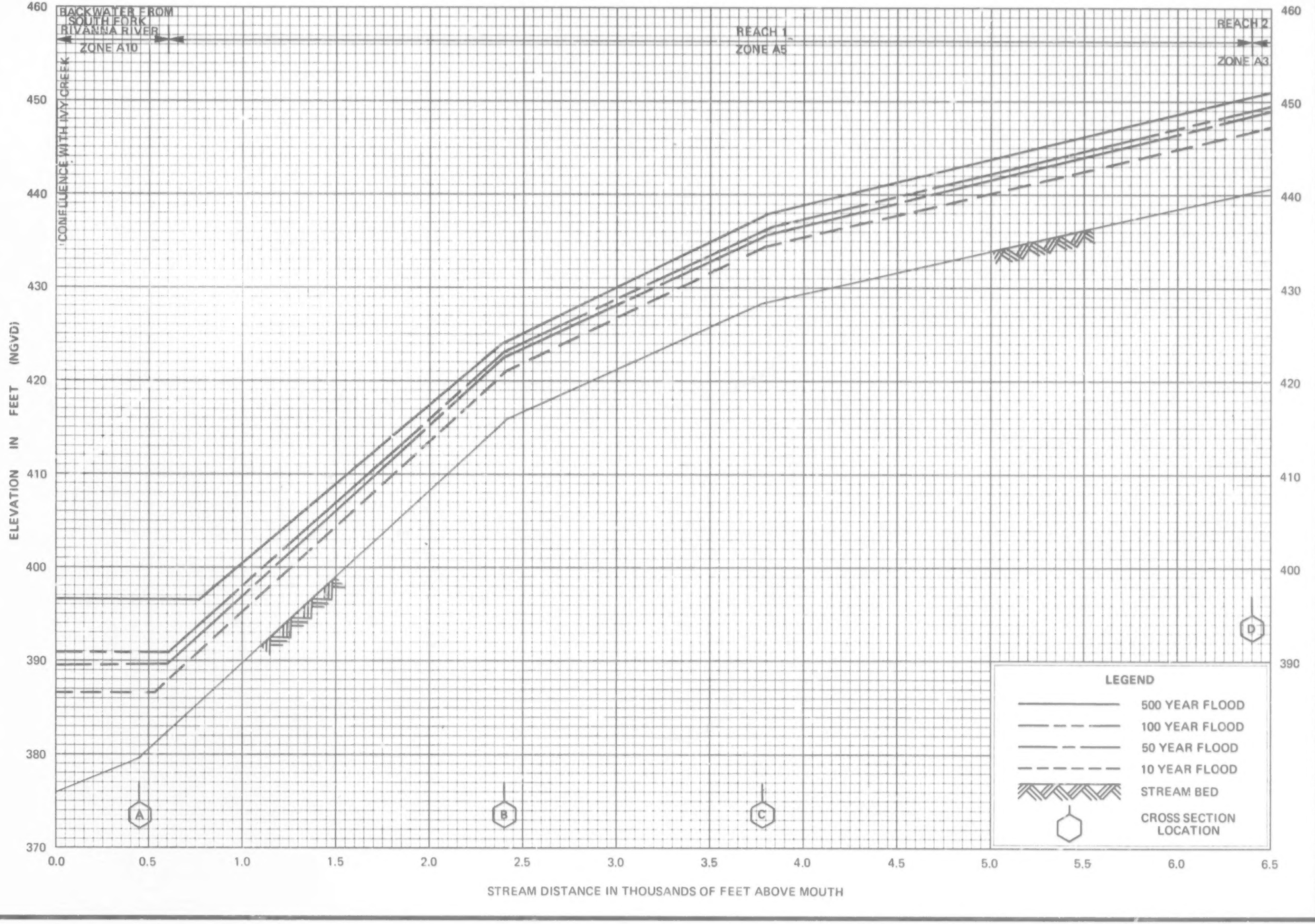

FEDERAL EMERGENCY MANAGEMENT AGENCY

20P

**ALBEMARLE COUNTY, VA**
(UNINCORPORATED AREAS)

**FLOOD PROFILES**

**LITTLE IVY CREEK**



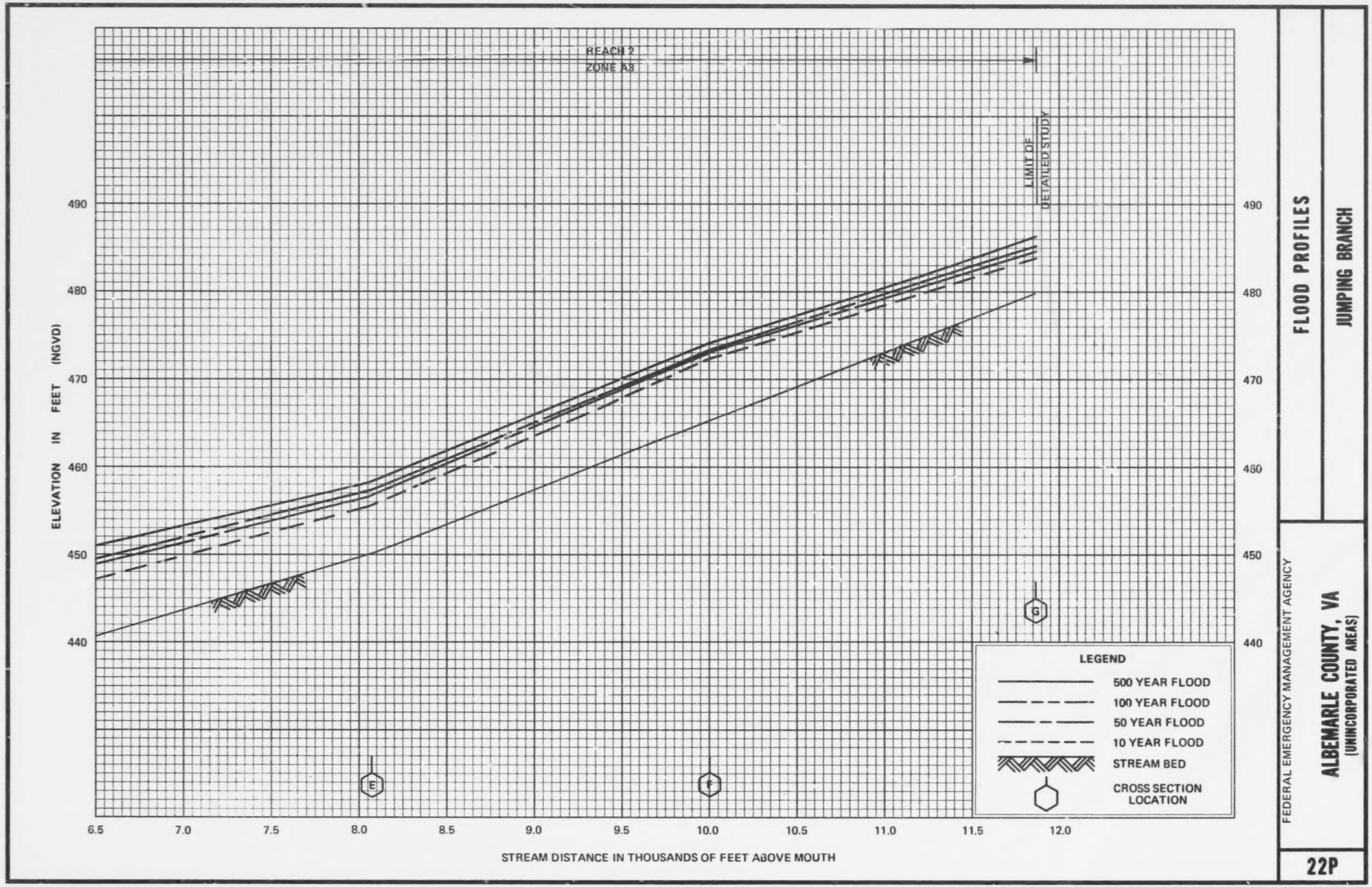

FLOOD PROFILES

JUMPING BRANCH

FEDERAL EMERGENCY MANAGEMENT AGENCY

ALBEMARLE COUNTY, VA
(UNINCORPORATED AREAS)

21P



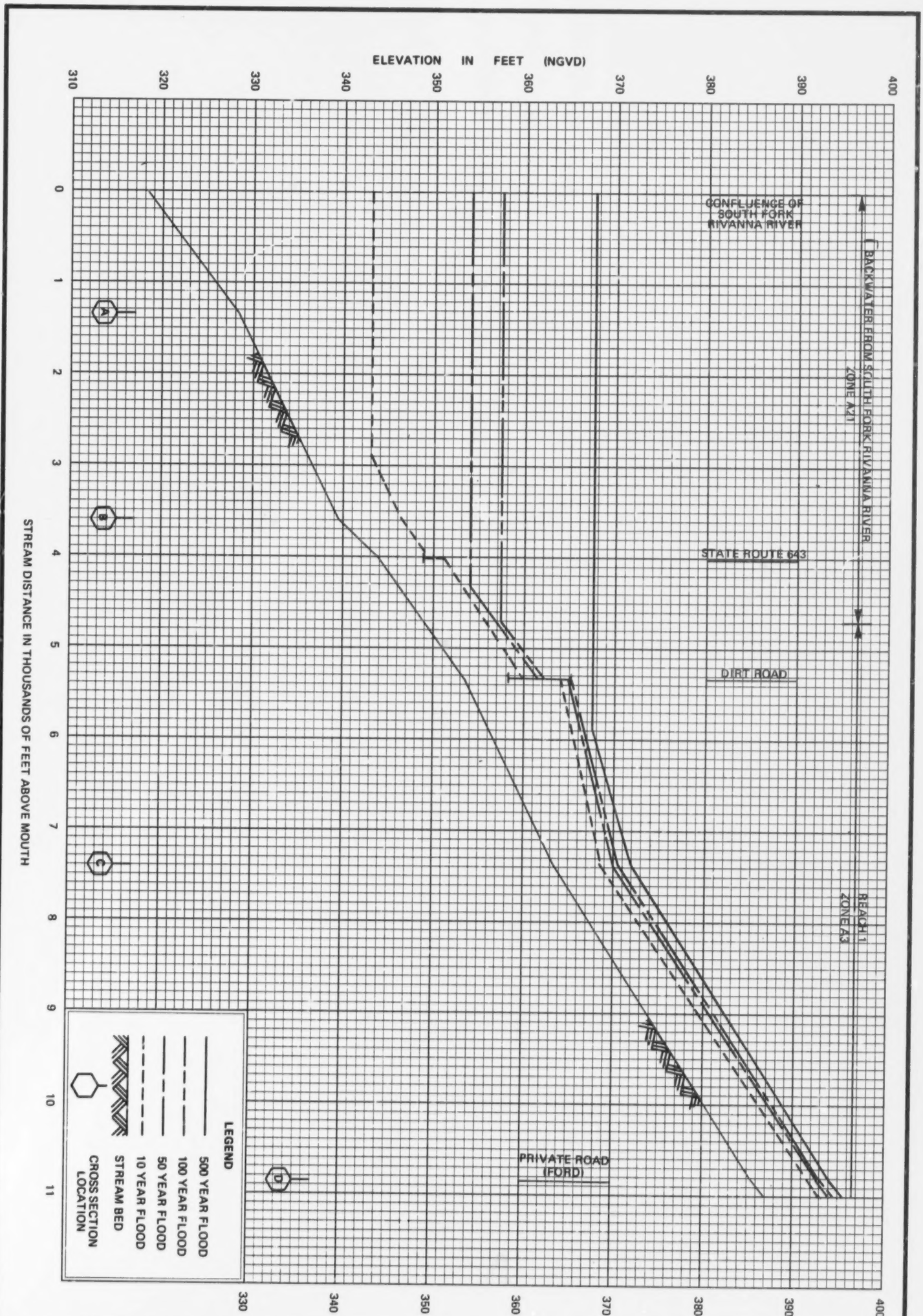

FLOOD PROFILES

JUMPING BRANCH

FEDERAL EMERGENCY MANAGEMENT AGENCY

ALBEMARLE COUNTY, VA
(UNINCORPORATED AREAS)

22P



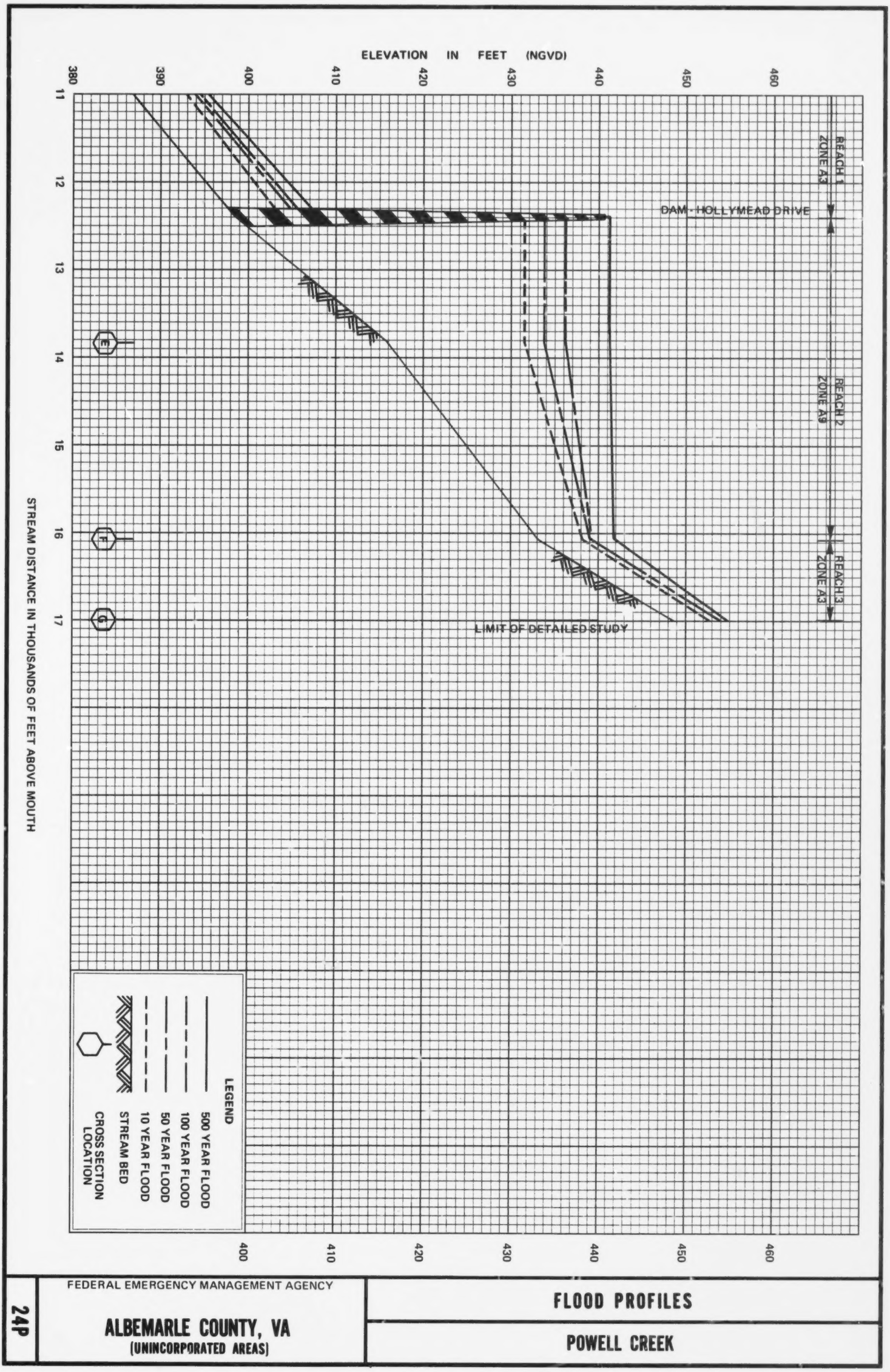

FEDERAL EMERGENCY MANAGEMENT AGENCY

**ALBEMARLE COUNTY, VA**
**(UNINCORPORATED AREAS)**

**FLOOD PROFILES**

**POWELL CREEK**

**23P**




56

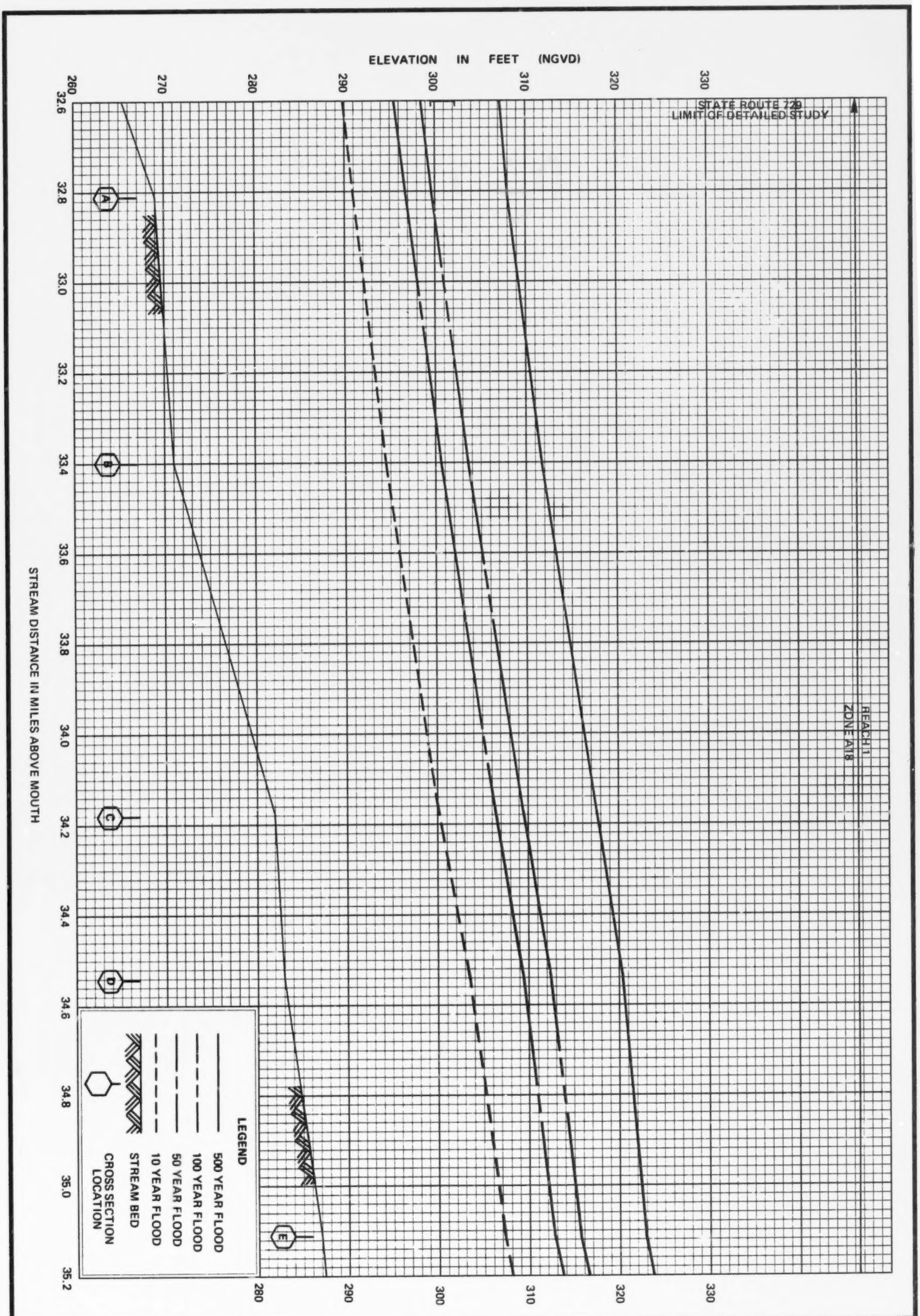
FEDERAL EMERGENCY MANAGEMENT AGENCY

**ALBEMARLE COUNTY, VA**
**(UNINCORPORATED AREAS)**

**FLOOD PROFILES**

**POWELL CREEK**

**24P**




FEDERAL EMERGENCY MANAGEMENT AGENCY

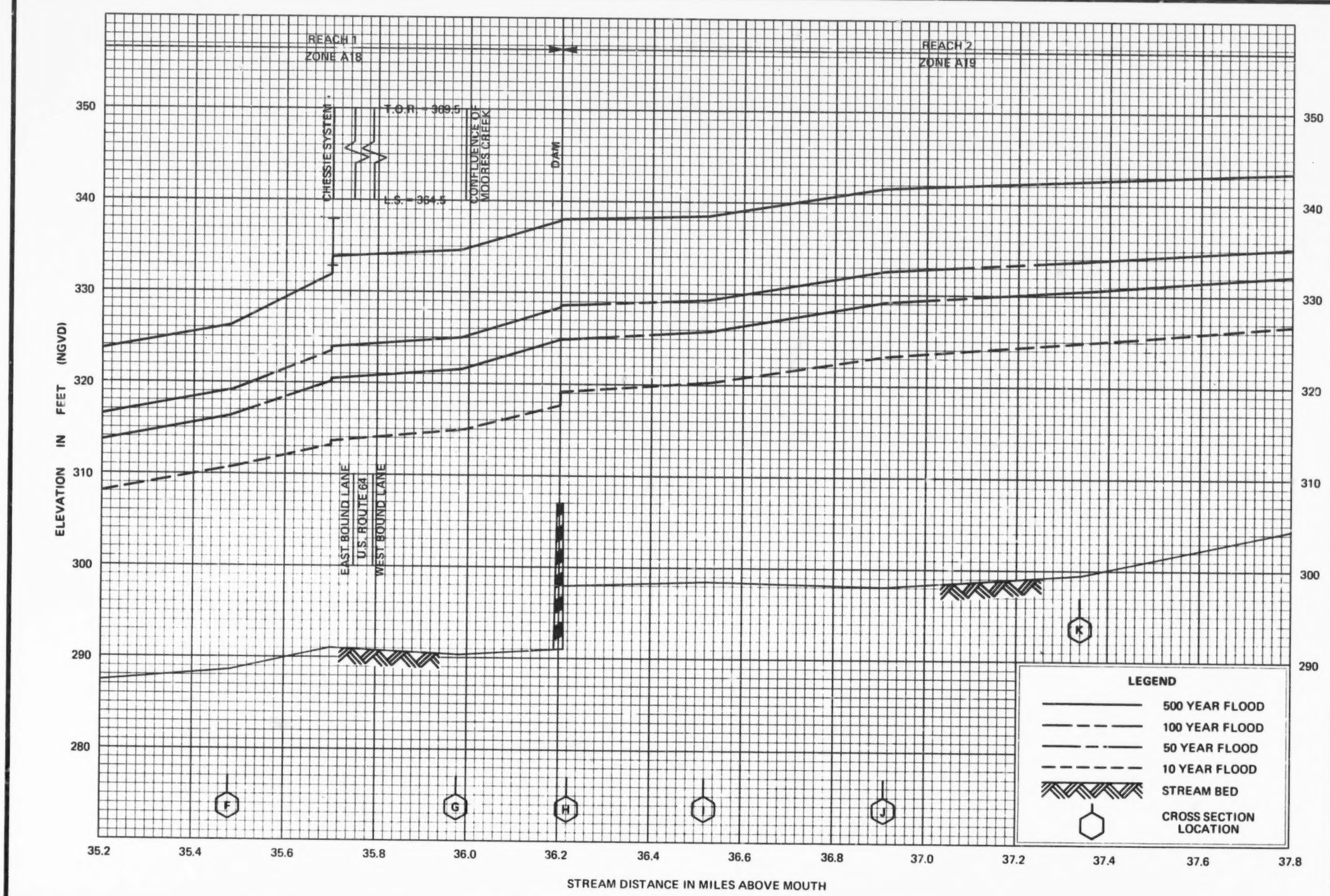
**ALBEMARLE COUNTY, VA**
**(UNINCORPORATED AREAS)**

**FLOOD PROFILES**

**RIVANNA RIVER**

**25P**

57



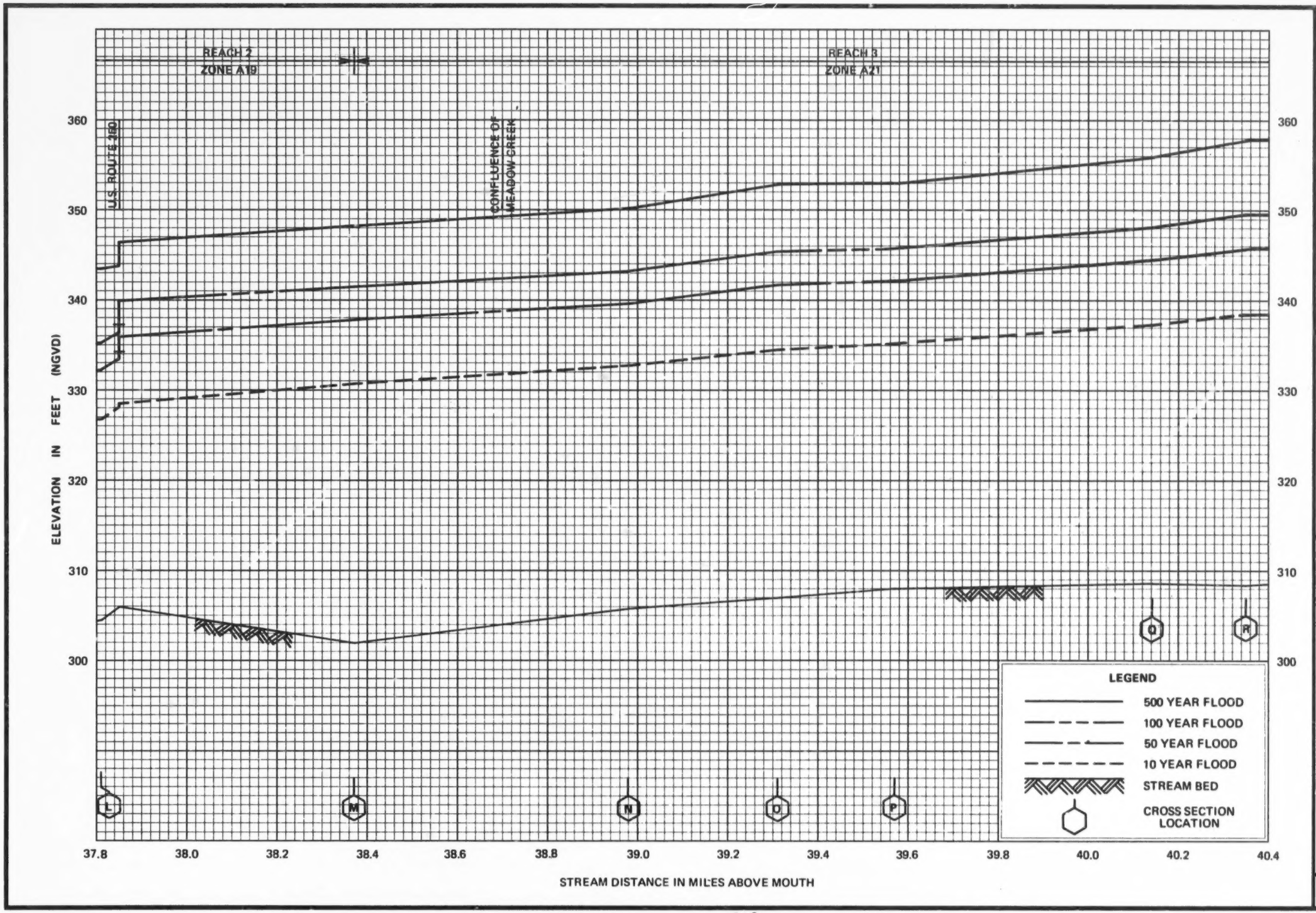

FLOOD PROFILES

RIVANNA RIVER

FEDERAL EMERGENCY MANAGEMENT AGENCY

ALBEMARLE COUNTY, VA
(UNINCORPORATED AREAS)

26P



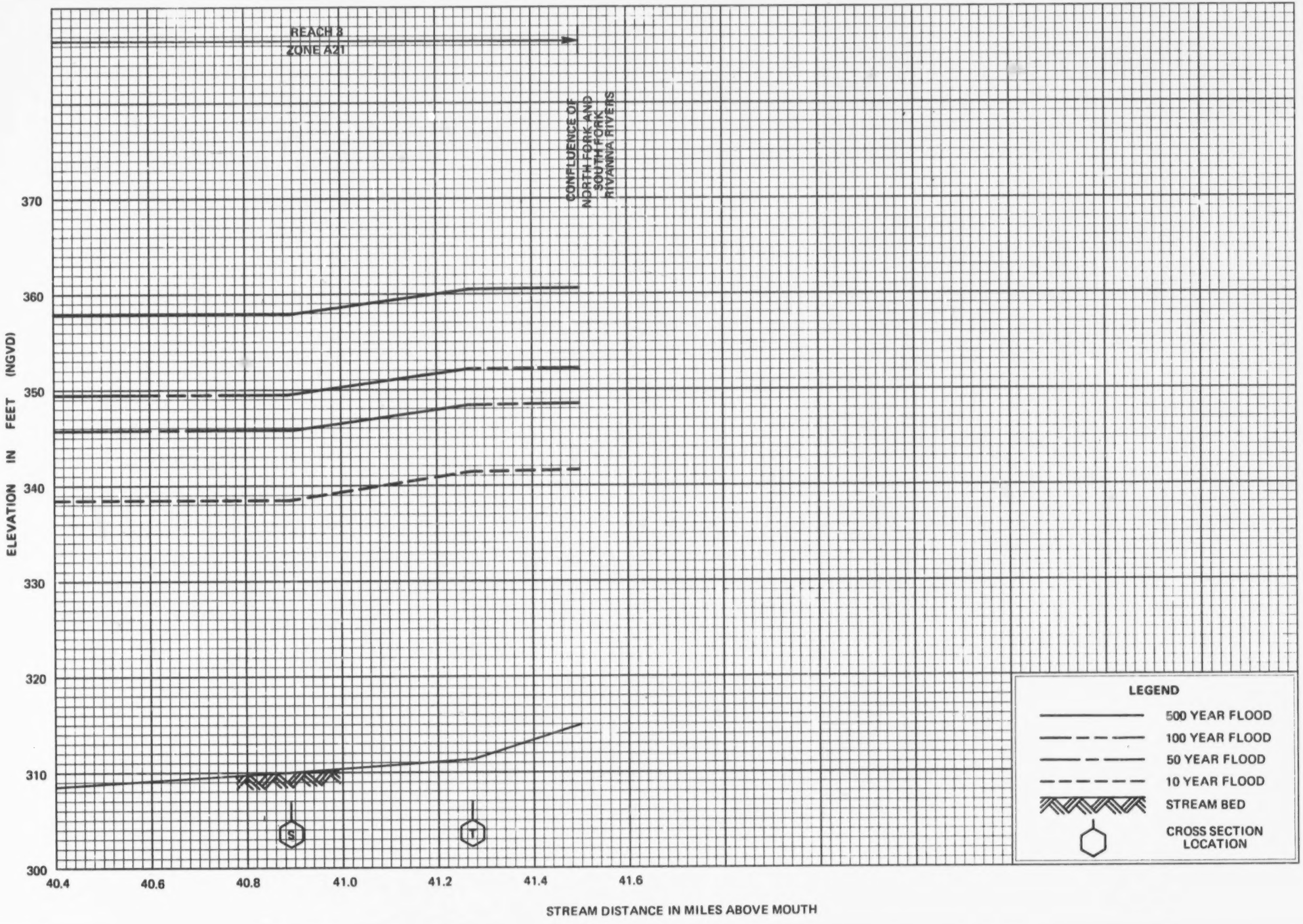

FLOOD PROFILES

RIVANNA RIVER

FEDERAL EMERGENCY MANAGEMENT AGENCY

ALBEMARLE COUNTY, VA
(UNINCORPORATED AREAS)

27P



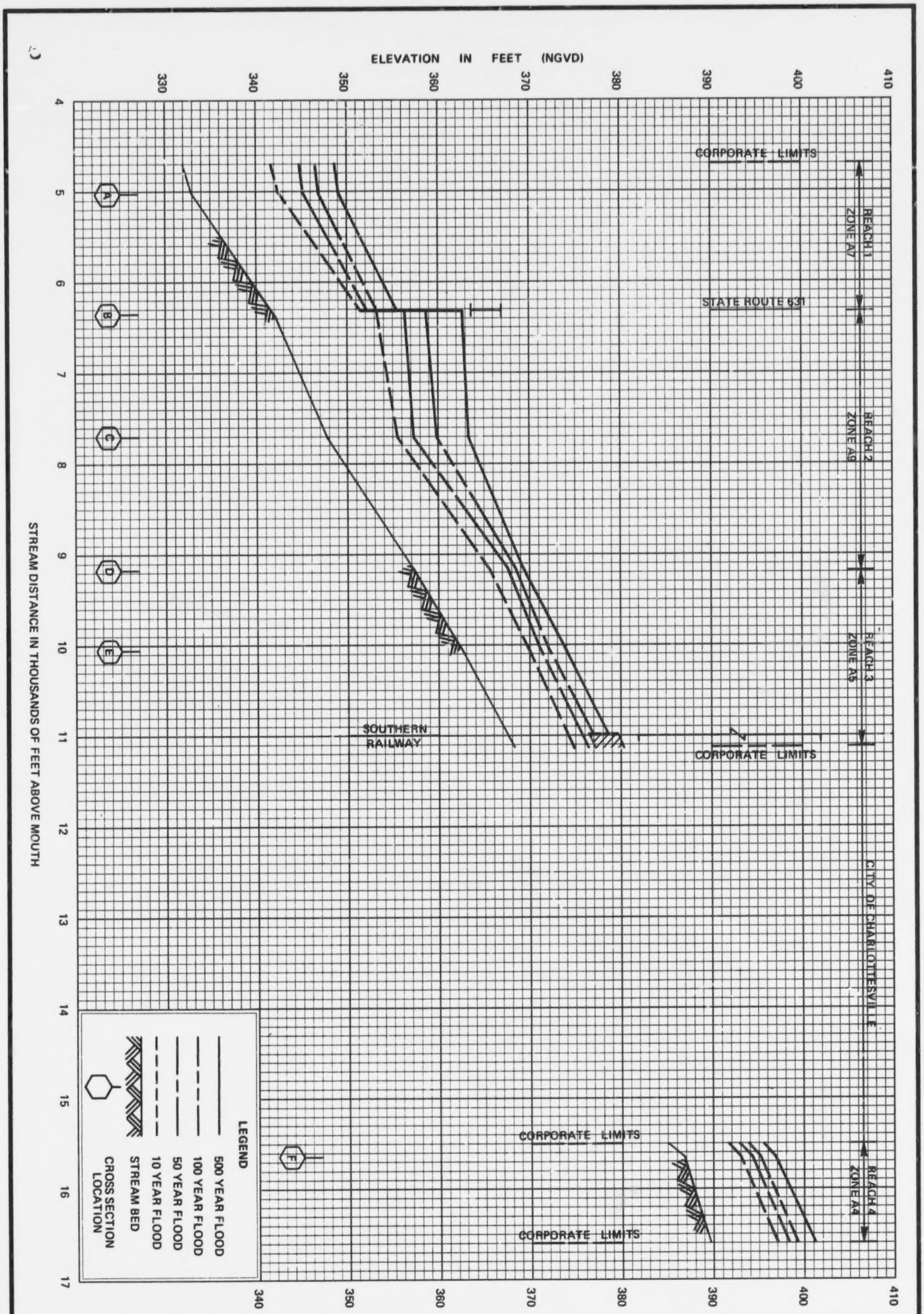

FLOOD PROFILES

RIVANNA RIVER

FEDERAL EMERGENCY MANAGEMENT AGENCY

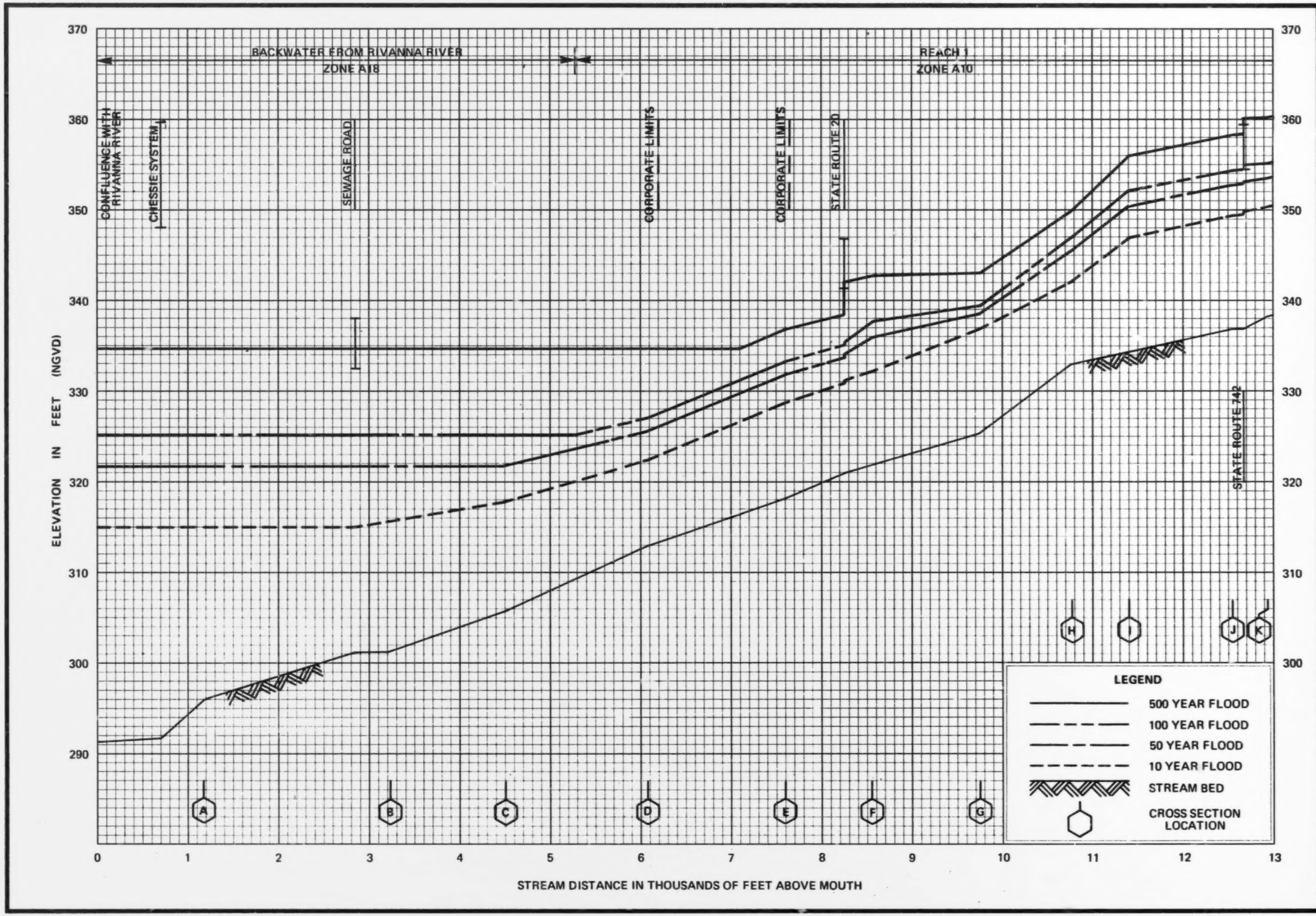
ALBEMARLE COUNTY, VA
(UNINCORPORATED AREAS)

28P




61

| 29P | FEDERAL EMERGENCY MANAGEMENT AGENCY<br>**ALBEMARLE COUNTY, VA**<br>(UNINCORPORATED AREAS) | **FLOOD PROFILES**<br>**MEADOW CREEK** |
|---|---|---|



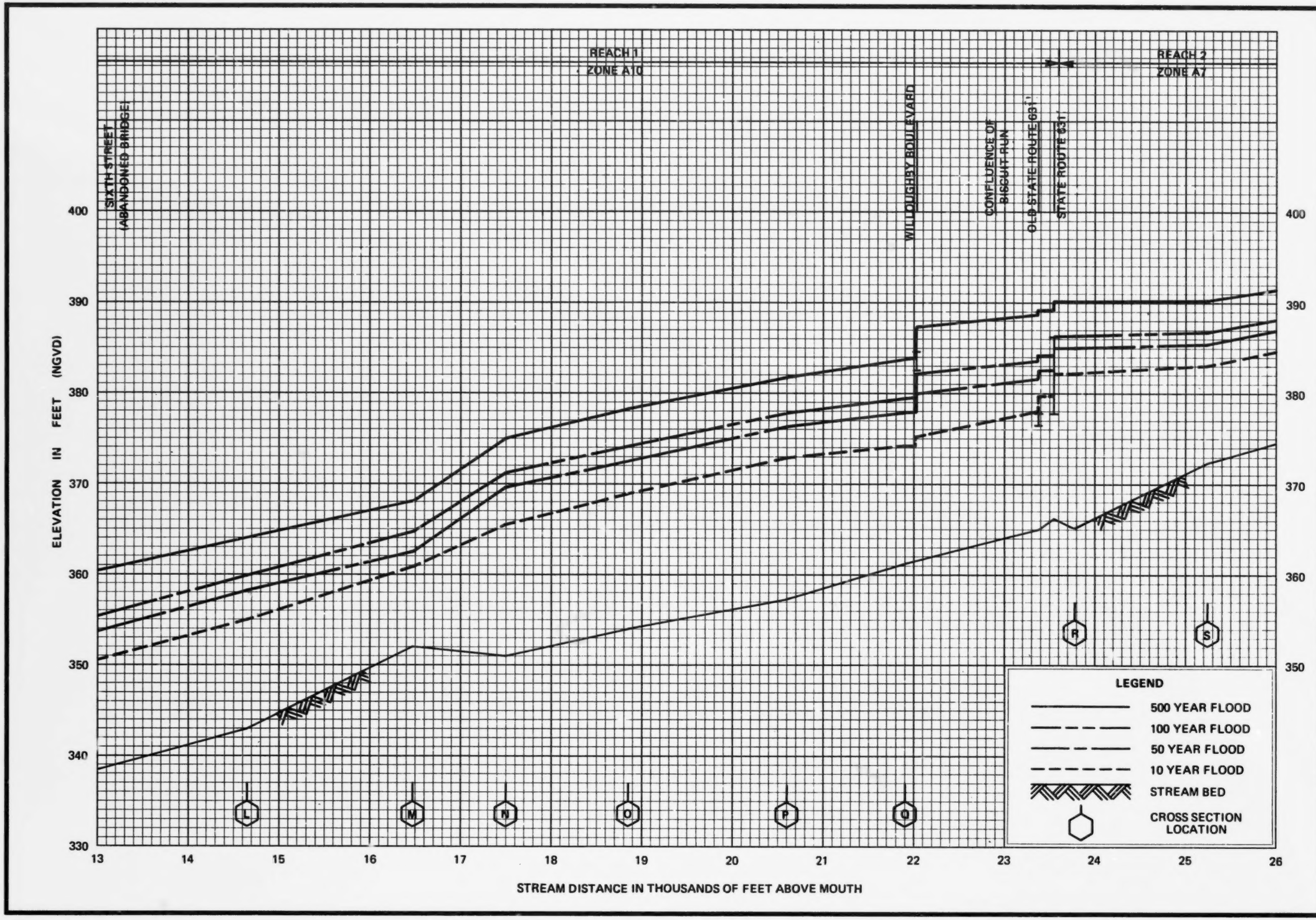

FLOOD PROFILES

MOORES CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY

ALBEMARLE COUNTY, VA
(UNINCORPORATED AREAS)

30P




FLOOD PROFILES

MOORES CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY

ALBEMARLE COUNTY, VA
(UNINCORPORATED AREAS)

31P

REACH 2
ZONE A7

STATE ROUTE 780
DAM
STATE ROUTE 781
PRIVATE ROAD (FORD)
SOUTHERN RAILWAY
PRIVATE ROAD
NORTH BOUND LANE U.S. ROUTE 29
SOUTH BOUND LANE
WEST BOUND LANE INTERSTATE 64
EAST BOUND LANE

ELEVATION IN FEET (NGVD)

460
450
440
430
420
410
400
390
380
370

26 27 28 29 30 31 32 33 34 35 36 37 38 39

STREAM DISTANCE IN THOUSANDS OF FEET ABOVE MOUTH

T U V W X Y Z AA

LEGEND
- 500 YEAR FLOOD
- 100 YEAR FLOOD
- 50 YEAR FLOOD
- 10 YEAR FLOOD
- STREAM BED
- CROSS SECTION LOCATION

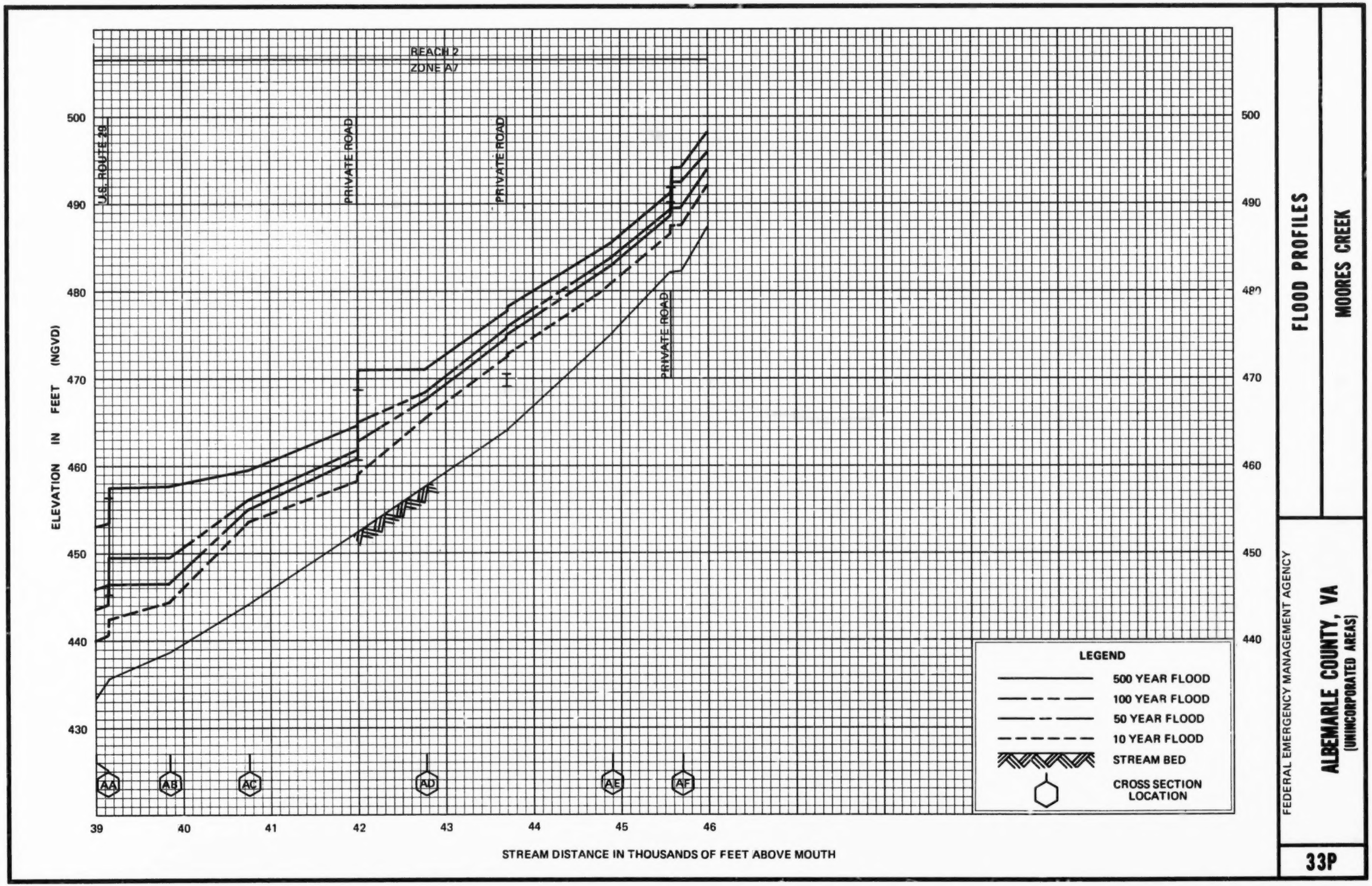
# FLOOD PROFILES

## MOORES CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY

## ALBEMARLE COUNTY, VA
(UNINCORPORATED AREAS)

32P



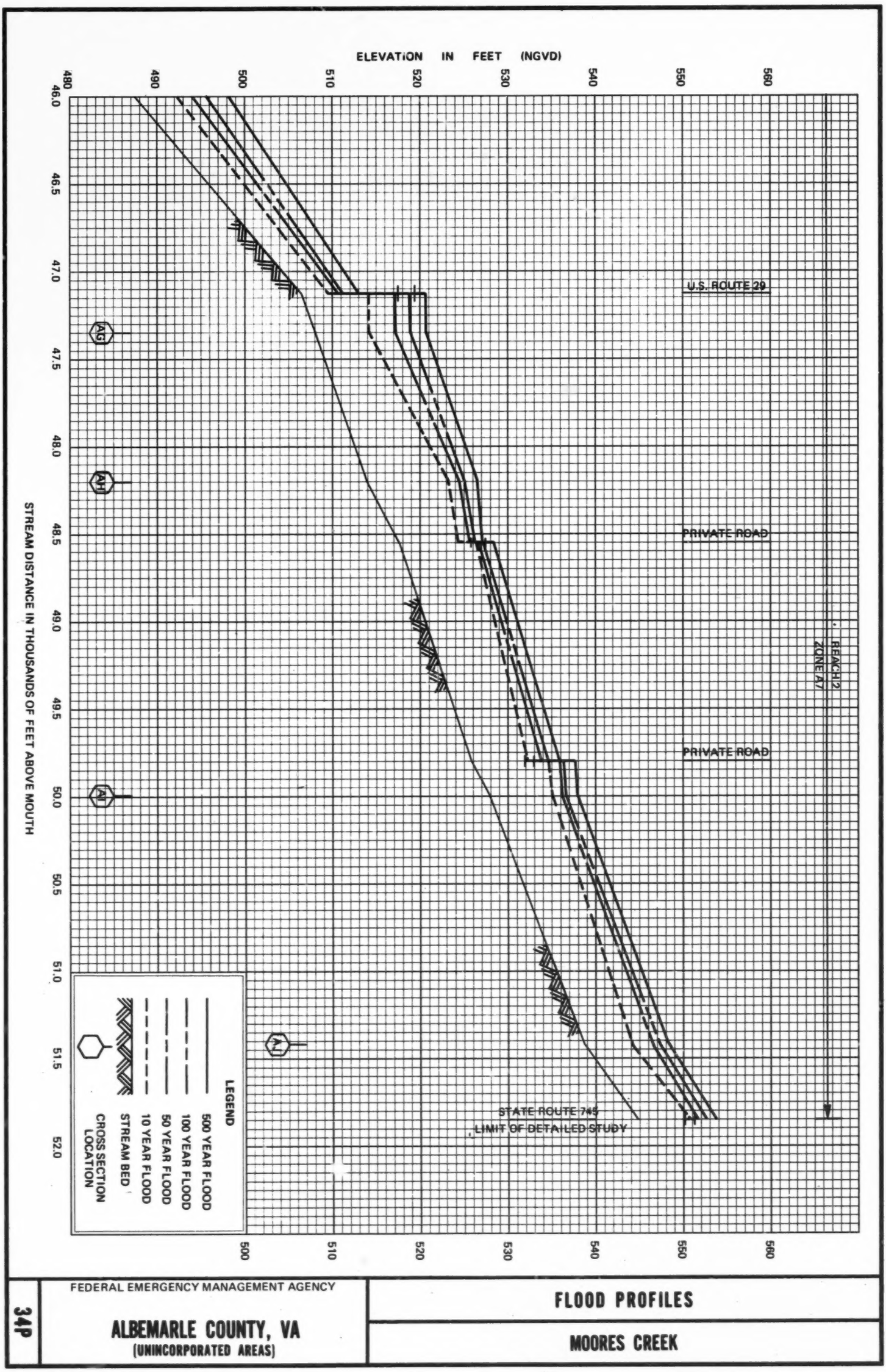

**FLOOD PROFILES**

**MOORES CREEK**

FEDERAL EMERGENCY MANAGEMENT AGENCY

**ALBEMARLE COUNTY, VA**
(UNINCORPORATED AREAS)

**33P**




FEDERAL EMERGENCY MANAGEMENT AGENCY

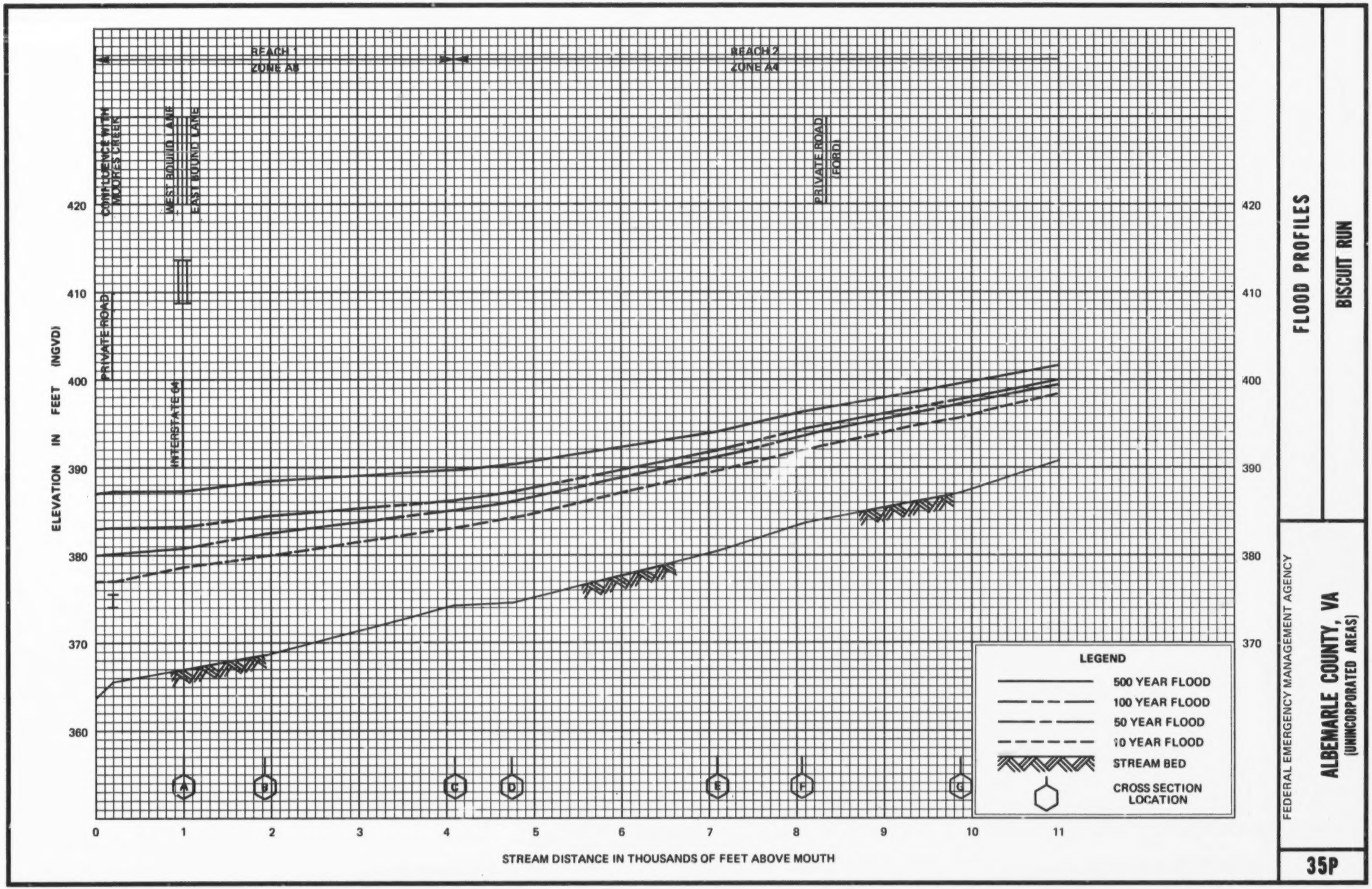
**ALBEMARLE COUNTY, VA**
**(UNINCORPORATED AREAS)**

**FLOOD PROFILES**

**MOORES CREEK**

34P

96



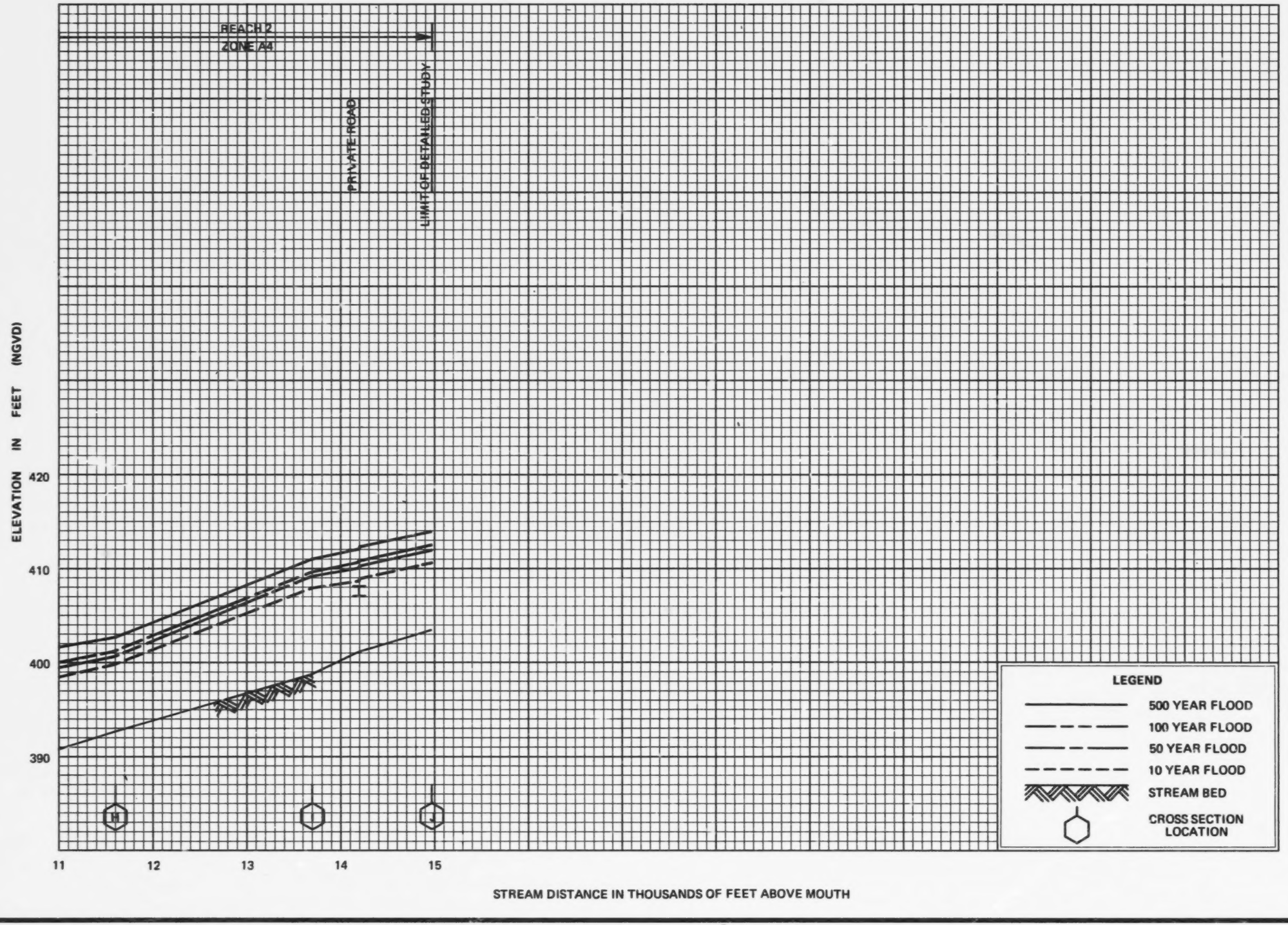

FLOOD PROFILES

BISCUIT RUN

FEDERAL EMERGENCY MANAGEMENT AGENCY

ALBEMARLE COUNTY, VA
(UNINCORPORATED AREAS)

35P



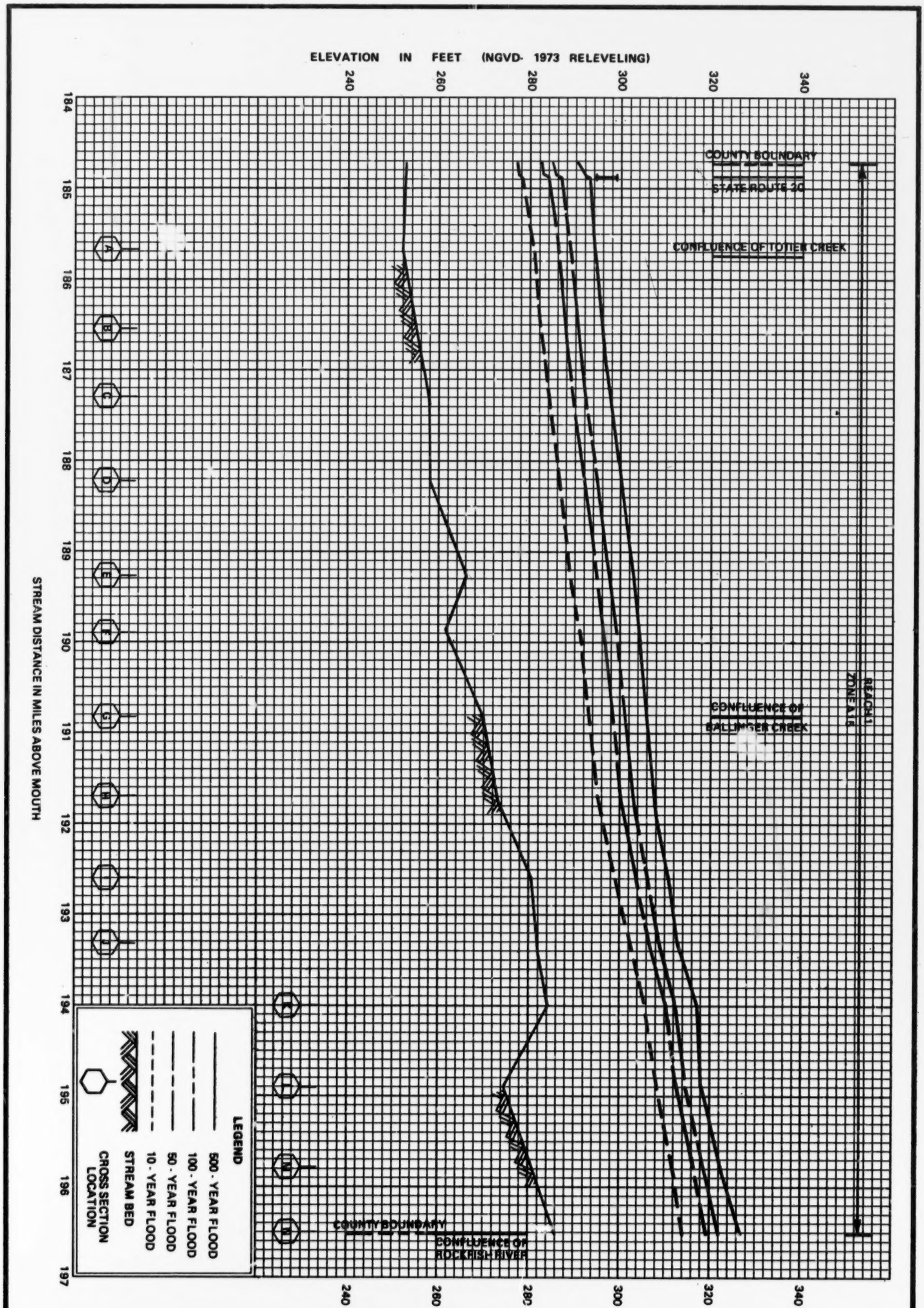

**FLOOD PROFILES**

**BISCUIT RUN**

FEDERAL EMERGENCY MANAGEMENT AGENCY

**ALBEMARLE COUNTY, VA**
**(UNINCORPORATED AREAS)**

**36P**




69

| 37P | FEDERAL EMERGENCY MANAGEMENT AGENCY<br>**ALBEMARLE COUNTY, VA**<br>(UNINCORPORATED AREAS) | **FLOOD PROFILES**<br>**JAMES RIVER** |
|---|---|---|